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Reading Engineered Spaces:
Bridges as Texts in Modern American Culture

by

©

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to John deWolf
(1906-2001)

Abstract

This dissertation, breaking with recent trends in the study of space, literature, and culture, contends that we read built spaces as narrative texts, not as inert objects or static containers of events. It furthermore proposes we understand bridges' evocations in novels, poetry, and other writings not as aloof, supplementary descriptions of these spaces, but as instances where such narratives are both enacted and made readable—in ways that substantively construct and renovate the spaces themselves. By examining such writings in this light, one can trace a literary-historical argument: the rise and fall of the 20th-century "gear-and-girder" age in United States, compared to its manifestation in other Modernist literatures and cultures, involved a unique sense of machine technology's challenge to ethics, and a concomitantly distinctive progression of ways of narrating built space.

Chapter I establishes this argument's theoretical frameworks. It diverges from the Marxist theorist Henri Lefebvre, contending that bridges are not containers of experience which subtly shape their contents but experiential *processes* in which meaning shifts dramatically. In narrating such shifts, writers of fiction make readable these spaces' potentials for transformative significations. Chapter II considers Willa Cather's *Alexander's Bridge* (1912) as both contribution and challenge to a discourse which narrates bridge construction as the achievement of lasting, complete objects. Chapter III examines a series of tales about the adoption of newly constructed

bridges into the spatial practice of their immediate communities; in this context, Thornton Wilder's *Bridge of San Luis Rey* (1927) makes an unconventional proposal that bridges challenge people to make connections across time, not space. Chapter IV concerns fictional texts about bridges which remain in use generations after their construction, contending that several writers, particularly Hart Crane in *The Bridge* (1933), account for the mystical significance which such a structure frequently takes on as its transformation from tangible passage into structuring metaphor. Finally, Chapter V examines how one particular gear-and-girder era structure—Edmonton, Alberta's High Level Bridge—has been variously narrated from its completion in 1913 to the present moment in literary fiction, non-fictional writings, and in the words of generations of city planners, politicians, and residents.

Acknowledgements

This project owes its greatest debt of gratitude to my supervisor, Dr. Shyamal Bagchee. I can only describe his generosity in sharing his vast knowledge of Modernist literature and culture while guiding this research as remarkable. I have learned much from him and feel fortunate indeed at having had the honour of working under his direction.

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Many at the University of Alberta Department of English have been especially generous in helping me to navigate the intricacies of institutional regulations, and I am especially indebted to Dr. Heather Zwicker, Kim Brown, Kris Calhoun, and Mary Marshall Durrell for their inexhaustible patience and good humour in fielding my many questions over the years. I should also mention that while studying in this department I certainly appreciated the irrepressible good cheer of my close friends and 4-50 office-mates Huw Osborne and Maximiliaan van Woudenberg.

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Perhaps no-one, however, provided more inspiration and motivation as this project came together (not to mention invaluable help with preparing the photographic plates) than Jenny Wong, who always seemed to know when to drag me away from the keyboard to go out for a break.

My grandfather Jack deWolf, to whom this dissertation is dedicated, valued education above all else throughout his life; he wouldn't let me quit university during my freshman year, and here we are.

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I: Theoretical Frameworks

> An architecture must be *walked through and traversed*. It is by no means that entirely graphic illusion certain schools of thought would like us to believe in, organized around some abstract point that pretends to be a man, a chimerical man with the eye of a fly and vision simultaneously circular. Such a man simply does not exist.
>
> —Le Corbusier, 1943

The Machine Age, American Culture, and the Readability of Built Space

This dissertation, breaking with recent trends in the study of space, literature, and culture, contends that we read built spaces as narrative texts instead of as inert objects or static containers of events. It also proposes we understand novels, poetry, and other writings not as aloof, supplementary descriptions of these spaces, but as instances where such narratives are at once both enacted and made readable—in ways that substantively construct and renovate the spaces themselves. Finally, it suggests that by tracking the pattern of transformative signification in these spaces through their engagement in other types of storytelling, one can make a literary-historical argument: the rise and fall of the "gear-and-girder" age in the United States was a progression of successive modes of narrating space as a field of intellectual and cultural practice.

People have built bridges for millennia, but the bridges on which this dissertation concentrates are mainly those of a particular moment in the history of technology, literature, and culture. It is well established that the

Modernist period of the late nineteenth and early twentieth centuries saw vast changes to both intellectual culture and society at large throughout Europe and North America, due to technological developments such as mechanical production, the photograph and the moving picture, the telegraph and telephone, radio, advances in timekeeping, and so on. Perhaps the classic work on this subject is Stephen Kern's wide-ranging *The Culture of Time and Space: 1880-1918* (1983), which includes such observations as "The ability to experience many distant events at the same time, made possible by the wireless and dramatized by the sinking of the *Titanic*, was part of a major change in the experience of the present" (67). New technologies, that is, alter not only our individual potential to perform work and experience sensation, but our fundamental sense of how we participate in a society. Kern's focus is mainly on Europe and the United Kingdom; there, as he describes it, the initial reception of these technologies was mostly positive, based on their perceived capacity to allow humankind to retire old disputes and bring on a new era of peace (and also, one might add, to help in the building of empires), but later reversed entirely due to the indescribable horror of mechanized warfare during World War I.

Similarly, Hugh Kenner's *The Mechanic Muse* (1987) assesses the impact of machine technology specifically on Modernist literary writers such as Eliot, Pound, Yeats, and Joyce. For Kenner, literary greatness in this era could be measured by an author's achievement in thoughtfully capturing modern technology's effect on human consciousness; he notes, for instance, that "city life was becoming episodic. A city shaped by rapid transit, and later by a telephone network, delivers its experience in discrete packets; the poet of *The Waste Land* was acutely sensitive to that" (11). It is perhaps no wonder that the philosopher Henri Bergson's meditations on perception and the unity of action appeared during this period in which the subway train and the wireless fragmented the urban experience. In *Matter and Memory* (1908), Bergson proposes the hypothesis that a *fact* is actually a process by which the mind organizes actions between the anticipation of experience, the decision whether of not to perform the action, and the experience itself. Yet is it the case, as mechanical organization of subway stops and assembly-line stations perhaps suggests, that motion—and, it quickly follows, motivation—could be infinitely chopped up to the point of sheer disconnection and absurdity? For Bergson, while we pass through any number of discrete points while performing any movement, the movement itself "is an undivided fact, or a series of undivided facts, whereas the trajectory is infinitely divisible" (192). New ways of understanding movement, this formulation suggests, were at hand, and their effects were just as often destabilizing and disorienting as ennobling. For a thinker like Bergson, one could only discover truth retroactively, in assessing that a discrete action had in fact been performed; Chapter III here, for one, will show that markedly similar thinking pervades Thornton Wilder's evocations of space, movement, and intelligibility in *Bridge of San Luis Rey*.

The American experience of this era's technological developments, was somewhat different from the European, especially after the First World War. In *Shifting Gears: Technology, Literature, Culture in Modernist America* (1987), Cecilia Tichi famously dubs the late nineteenth and early twentieth centuries the "gear-and-girder era." Technologically, she relates, this period was characterized by the "visually compelling" (5) milieu of the steam engine, the exposed cast-iron or steel girder, the electrical power generator, and the mechanized factory. The era saw the inception of large-scale distribution of electricity, the concept of interchangeable machine parts, Frederick Winslow Taylor's and Frank Gilbreth's industrial efficiency studies, the dawning of the mass-produced automobile, and so on. For Tichi, these developments had profound intellectual implications for cultural discourse, as they begat the metaphor of the "human being as a machine for the consumption and production of energy. And [such conceptions] defined nature similarly as a congeries of machines and structures comprised of interworking component parts" (xii). As others have noted, in popular publications of the day bridges in particular were credited with being able to redeem the congestion and inequity of contemporary industrial and residential landscapes. In an article titled "Triumphs of American Bridge-Building" published in *The Century Magazine* in 1902, for example, Frank W. Skinner writes that the long-span bridge, at that point in existence only about fifty years, not only brings together states and countries, but "opens avenues to parks and boulevards, creates and increases commerce and razes its barriers, adds vastly to property values, modifies political powers, ameliorates the social conditions of millions of people, and saves thousands of lives" (228).

Although a bridge has girders but no gears, I refer to cast-iron, wrought-iron, and steel bridges of the 19th and early-20th centuries as gear-and-girder structures for their significant contribution to this mechanical aesthetic. In general, to follow Tichi, gear-and-girder technologies propose a certain democratic transparency of function: they not only enable dynamic experience but openly show us the mechanics by which they do so. Their perceived cultural redemptiveness results partially from their unveiling of the hidden underpinnings of built space: all is brought out into the open where one can see how it works, and the world thereby becomes not only more efficient and enjoyable but more socially egalitarian. Notably, in the United States this period was the great era of the professional engineer, the great "bearer of civilization" to so-called remote locations. In the words of the critic Elizabeth Ammons, "Titan, magician, gambler: the engineer at the turn of the century was a celebrated national hero—the man who, literally, would erect the brave new century" (746). Tichi notes that civil engineering was by far the fastest-growing professional occupation in American census data from 1850 to 1880, with a sixteen-fold increase in those years (104). The engineer, according to Tichi, was celebrated both as an adventurer and, more importantly to a society facing enormous changes, as a purveyor of efficiency and stability. Recently, Sharon Stockton has even advanced the argument that this early-20th-century veneration of engineers, while usually thought of as ideologically distant from contemporary European Fascism, is in fact closely related to it. "I claim here," she writes, "that the American rhetoric of the heroic engineer *is*, in some ways, the rhetoric of the fascist hero, with the same tendency to paste over the rift between nature and technology, expression and production, vision and violence" (815). Indeed, many have noted the era's pervasive tendency to see nature as inherently chaotic until brought soothingly to order by engineers. Tichi illustrates this need for reassurance by citing a speech given by soon-to-be-mayor of New York City, Abram Hewitt, in 1883, during the opening ceremonies of the Brooklyn Bridge:

> The structure 'looks like a motionless mass of masonry and metal,' Hewitt observed. 'But as a matter of fact it is instinct with motion. . . . It is an aggregation of unstable elements, changing with every change in the temperature and every movement of the heavenly bodies.' Hewitt then posed the challenge central to engineering and, by extension, to American society itself. 'The problem was, out of these unstable elements, to produce absolute stability.' (105)

Because of their perceived ability to tame the elements and bring order to commercial development, American engineers were often seen as this era's frontiersmen, simultaneously bearing modernity and order to the heartland and beyond.

As Tichi and others have pointed out, gear-and-girder technology also had profound effects specifically on literary writing. In *The Machine in the Garden* (1964), for instance, Leo Marx argues that machine technology leads American writers to create a unique creative field by redefining the pastoral mode: "What begins as a conventional tribute to the pleasures of withdrawal from the world—a simple pleasure fantasy—is transformed by the interruption of the machine into a far more complex state of mind" (15). Moreover, this complex consciousness is ineluctably "associated with crude, masculine aggressiveness in contrast with the tender, feminine, and submissive attitudes traditionally attached to the landscape" (28-29). The machine of the gear-and-girder age is therefore imagined both as threat and promise—either way with profound implications for fictional narrative in the United States.[1]

If there ever was a profound loss of faith in the abilities of this technology and its master engineers to solve the world's problems, for Americans it did not happen during World War I but later with the Great Depression; at that time, the first engineer president, Herbert Hoover, proved unable to apply engineering techniques to right the faltering economy, as had been hoped (Tichi 169-70). The gear-and-girder era began to decline as a visual aesthetic in the 1930s with the encasement of machines and advances in civil engineering which saw latticed steel girders supplanted with smooth concrete forms. One exception, as it happens, was suspension bridges, whose decks were stabilized with deep steel trusses for some time onward—efforts in the 1930s to replace these structural components with thinner solid-plate girders culminated in the dramatic failure of the Tacoma Narrows Bridge in a windstorm in 1940, at which point the seemingly-outdated technology of the steel-girder platform suddenly came back into vogue for this particular application. Certainly, it is arguable that in North America, a certain fascination—and more importantly, *trust*—in engineering technology's capacity to make life better, cleaner, more convenient, and safer persisted in force right through to the concomitant rise of cyber-technologies and back-to-the-earth movements in the 1960s, and perhaps lingers even to the present.[2]

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[1] For more recent discussions of Machine-Age American culture and literature, see, for example, Martha Banta, *Taylored Lives: Narrative Productions in the Age of Taylor, Veblen, and Ford* (1993); David E. Nye, *Narratives and Spaces: Technology and the Construction of American Culture* (1997); and Mark Seltzer, *Bodies and Machines* (1992).

Yet in terms of a history of the practice of space, what matters here is that the prominent built works from this era ceased, over time, to be technologically current, and instead became living legacies of past ways of building. Although steam trains with exposed drive mechanisms, biplanes, and Model Ts are now museum pieces, the great gear-and-girder bridges for the most part continue to be in service, fulfilling the pragmatic functions for which they were originally designed. The *passage* they offer, however, has been fundamentally altered over time as the era of their construction recedes ever further into the past.

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[2] Hoover himself continued to express a belief in the transformative power of engineers as late as 1939. In a speech that year, he declaimed that "With engineers there is the fascination of watching a figment of the imagination emerge through the aid of the sciences to a plan on paper. Then it moves to realization in stone or metal or energy. Then it brings jobs and homes to men. Then it adds to the necessities and comforts of homes. That is the engineer's high privilege among professions" (qtd. in Stockton, 816-7).

This dissertation's central argument is that a bridge is exactly congruent with Gerard Genette's description of narrative, which "can only be 'consumed,' and therefore actualized, in a *time* that is obviously reading time" (34). Its most tangible existence is as functional passage in time, and this passage itself has a history. As Alan Trachtenberg formulates it, in the history of such great structures there occurs a "classic moment," in which "*walking* crosses over to *crossing*" ("Cultural Revisions" 64). Yet to what extent are the narratives of space made readable in the works of gear-and-girder-era writers the product of universal, mechanical functions of narration, or of local cultural, historical, and political contexts? It becomes apparent in this study that some measure of each applies: similar stories emerge everywhere as bridges are narrated over the course of their existence[3], yet persistent differences emerge in these stories as they are taken up in different traditions. For American writers, bridges tend to suture communities in time, not in space—a convention which speaks to specific ethical and political concerns.

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[3] Chapter III here in particular discusses how many different cultures have traditions in which the construction of a bridge is seen as an affront to the gods, so that they require a human sacrifice to remain standing.

A reading of a bridge is a reading of how the space below and around the span itself becomes readable as a procession of objects in time, with resonant metaphorical connotations. In fact, a bridge's inherent sense of *promise*, the compelling yet inchoate message it offers to those who would cross by it, changes over time. One important feature of most writing about bridges is to make palpable the history of a given structure, that is, to allow access to histories and experiences which are not immediately available to the walker or motorist. We repeatedly find in the work of both fictional and non-fictional storytellers, however, that the further away in time one is from a bridge's construction, the more profoundly, and more mystically, it speaks in the perceiver's imagination. As a bridge is built, it promises physical passage; as it is used, it promises new community standards; as it ages, it promises metaphysical discovery; as it gets yet older, it becomes a museum of antique practices. What we think of as a metaphysical impulse, it turns out, is the promise of mystical connection through time, a connection with the departed and with those to come.

A significant part of this argument is that printed fictional texts written about or around bridges often have a much more constituent role in the lives of the physical objects themselves than most scholars have allowed. For many critics, texts can describe or even embody physical spaces but do not play a role in creating them. Tichi, who describes a body of American literature from a slightly later date than that covered in the bulk of Marx's book, finds that American authors of the gear-and-girder age, inspired by the technology of the day, invented a new ethos of fictional writing based on the principles of the straight line, mechanical disassociation from production, and interchangeable parts; this ethos "can be shown to obey the design rules for sound structures and efficient machines" (16). In putting it into practice in their work, writers like Dos Passos, Hemingway, and William Carlos Williams "exploited [technology's] possibilities and vivified the national literature" (16). These authors' works, Tichi insists, do not seek verisimilitude sheerly through new means of description, but through mimetic emulation: "The machine-age text does not contain *representations* of the machine—it too *is* the machine" (16). For Tichi, then, "Novelists have the task of encoding culture in word choices that represent the vanguard of contemporary consciousness" (27). The built world exists prior to its fictional representation, in other words, so that the latter can only imitate the former. M.M. Bakhtin likewise argues that "real people, the authors and the listeners and readers . . . are located in a real, unitary and as yet incomplete historical world set off by a sharp and categorical boundary from the *represented* world in the text. Therefore we may call this world the world that *creates* the text" (253). More recently, such conceptions have, if anything, gained in popularity. In his book on American novels of mid-20th-century urban decay, for example, the critic Carlo Rotella (1998) argues that

> even though almost all of the literary writing I analyze was widely read at the time of publication, there is not much point in arguing that urban literature itself played a leading role in shaping the thinking of many Americans. Rather, the value of a historical reading of these texts lies in the tendency of literature—especially the kind of socially observant, engaged literature treated here—to gather together, dramatize, and exploit aesthetically the materials made available by a historical moment. (8)

In other words, the achievement of these writers is in embodying in their fiction the structural techniques of the machine process as it has entered (or should enter) consciousness.

Even Alan Trachtenberg's *Brooklyn Bridge: Fact and Symbol* (1965), which studies how the Brooklyn Bridge, besides being a physical structure, was and is the product of particular ideas[4], and has in turn engendered other ideas in the minds of artists and poets since its completion in 1883, reflects this type of thinking. "By distinguishing between 'fact' and 'symbol,'" he writes, "I mean to designate two separate modes of existence: one has a specific location in time and space; the other, its place in the mind, or in the collective imagination of Americans" (vii). In a two-page description of a walker's reflections while crossing this bridge at the outset, Trachtenberg finds a dramatic oscillation between upwards and downwards trajectories, hope and despair: "The walker is once more carried along, up to a balcony, and down, down into the dark opening of a subway concourse" (4). However, *Brooklyn Bridge: Fact and Symbol* ultimately evokes the physical bridge as unitary static object existing prior to its representation in other discourses: as Symbol, his bridge becomes not a passage but a unitary, complete object, wholly apprehended only when viewed from a distance.

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[4] Trachtenberg relates that John Roebling, the bridge's planner and chief engineer, was as a young man in his native Germany a student of G.F. Hegel, and saw his own career as fulfilling Hegel's prophecies of how a better society could be actualized. As Trachtenberg puts it, "'Before the sculptor can embody his spiritual or ideal conception into marble, he must have spiritually created the statue in his own mind,' wrote John Roebling in 'Life and Creation' (1864), an essay inspired by Henry James, Sr.'s *Shadow and Substance*" (68).

In this conceit, the book is unsatisfying—and Trachtenberg's later formulation, quoted above and further described here in Chapter IV, indicates he might agree. For one, it can be demonstrated that bridges, as built and used, can be profitably critiqued using techniques similar to those typically applied to printed writings. But more fundamentally, Trachtenberg's earlier formulation cannot recognize how significant it is that printed writings make these practices readable, in different ways over time, as *processes*. Bridges are not only connotatively significant as large physical objects, but also as sites of change, of transformation. By affecting the pattern of these transformations and what they can accomplish, storytelling not only constructs the figurative existence of bridges as something separate from their physical presence, but, far more profoundly, their function itself—a category which encompasses both figurative and physical components, and in fact blurs the distinction between them.

Narrative Practice and the Production of Space

The notion that space plays a unique and profound role in constructing the idea of America has long been central to studies of American literature and culture. At the very beginning of *Call me Ishmael*, his book on Herman Melville's *Moby Dick*, the American poet Charles Olson declares, famously:

> I take SPACE to be the central fact to man born in America, from Folsom Cave to now. I spell it large because it becomes large here. Large, and without mercy. (11)

Large, and also largely empty of the constraints of rules or of the presence of existing aboriginal inhabitants, as expressed in this formulation: an open, blank book on which any number of possibilities could be written. As the historian David E. Nye argues, "in the American imagination first there is an empty space traversed by a grid of surveyor's lines, followed by the dramatic imposition of human will on this space. And if the creation does not suit, it can be erased and something new erected on the spot, or it can be abandoned to grow up with new trees" (*Narratives* 4).

This imperialist imagining of landscape as clean slate is inherent to such celebrated ideas as Frederick Jackson Turner's 1893 frontier thesis ("the frontier is the outer edge of the wave—the meeting point between savagery and civilization" [28]) and its later elaboration and critique in Henry Nash Smith's *Virgin Land: The American West as Symbol and Myth* (1950). While it may have some currency in terms of mythological desire, however, the way people actually engage and experience space over time has always to some extent frustrated such yearning. Some writers have indeed been attentive to this frustration: while drinking one evening at a party in a prohibition-era New York hotel room, for instance, *The Great Gatsby*'s Nick Carraway looks out at the skyline and feels that

> high over the city our line of yellow windows must have contributed their share of human secrecy to the casual watcher in the darkening streets, and I was him too, looking up and wondering. I was within and without, simultaneously enchanted and repelled by the inexhaustible variety of life. (37)

The Modernist built landscape and elevated point of view here combine to create a sense of wonder: this space is indeed open to possibility, but not the possibility of marking an indelible mark, only that of having experiences of dubious value and uncertain satisfaction.

Lately, scholars of American literature and culture have begun to explore the ambiguous, complex, and often contested nature of these various experiences much more closely. In "The Mind a Department Store" (2002), for instance, Gail McDonald reads retail space through a series of American novels of the early twentieth century, finding that commercial space in the era became much less *specific* (a wide range of different products could now be found within the space of a single large department store), drastically complicating the nature of boundaries and portals between spaces with different purposes. Henry James, she reports, had commented on feeling a certain sense of unease in New York, stemming, he felt, from the gradual disappearance of closable doors in indoor public places (228). Overall, for McDonald, "The juxtaposition of immeasurable vastness and severe constriction captures in the baldest terms the reconfiguration of space in the Gilded Age" (249). To extend this argument, all ideology aside it is never truly possible for a person to experience the limitless possibilities of empty space. All spatial experience is based both on physical equipment and on a variety of rules or practices, and when faced with the apparent absence of either as occurs in times of great change in the technologies, designs, and practices of space, we become uneasy and seek direction or constraint.[5]

Such insight is by no means new, but has attained a fresh range of implications in the light of recent theoretical trends in a number of academic disciplines resulting from recent cultural studies-inspired work regarding questions of spatial practice's constituent role in enforcing capitalist hegemony. In a 1993 essay entitled "A Note on Race and Architecture," the black philosopher and theologian Cornel West, for one, called for "a refined and revisionist architectural historiography that creatively fuses social histories of architectural practices and social histories of technology in light of sophisticated interpretations of the present cultural crisis" (53). Exactly such investigations have recently been carried out using models proposed by a number of Marxist thinkers, including Fredric Jameson, David Harvey, and Edward W. Soja, all of whom have published on this topic within the last fifteen years, and Walter Benjamin, whose work of the 1920s through the early 1940s is lately being re-read in the light of the contribution it makes to this scholarly enterprise. Jameson and Harvey, for their part, were in the late 1980s and early 1990s interested in assessing, in Marxist terms, the implications of the apparent intellectual and cultural shift from the modern to the postmodern as expressly spatial developments in architecture and technology. For Jameson, a postmodern "mutation in space itself" (*Postmodernism* 38) does not locate people in space and cannot itself be neatly surmised by either narrative or photographic means. In Los Angeles' Westin Bonaventure Hotel (designed by John Portman), he experiences "the feeling that emptiness here is absolutely packed, that it is an element within which you yourself are immersed, without any of that distance that formerly enabled the perception of perspective or volume" (43). Within this new sphere all motion is irrelevant, for "the escalators and elevators here henceforth replace movement but also, and above all, designate themselves as new reflexive signs and emblems of movement proper" (42). Likewise,

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[5] In point of fact, there is an argument—a valid one, I think—that *all* technologies and practices are those of space: cf. Michel de Certeau's contention in his chapter "Spatial Stories" that "every story is a travel story—a spatial practice" (115).

Harvey argues that "How a city looks and how its spaces are organized forms a material base upon which a range of possible sensations and social practices can be thought about, evaluated, and achieved" (67), and finds that "postmodernists depart radically from modernist conceptions of how to regard space" (66).[6]

In taking space as a field of practice, not as container or physical object, Jameson's and Harvey's Marxist elucidations of postmodernism are only possible because of the work of Henri Lefebvre. Lefebvre's book *The Production of Space*, having been published in French in 1974, has been steadily gaining influence in English-language scholarship since the publication of its English translation in 1991—and since its having been promoted at length in the political geographer Edward W. Soja's widely-read *Thirdspace* (1996). As Soja points out, "What Lefebvre was doing was *substituting everyday life for the workplace* as the primary locus of exploitation, domination, and struggle" (41; emphasis original). In doing so, *The Production of Space* opposes itself to such theorists such as Michel

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[6] Although not writing from a Marxist standpoint, the French theorist Paul Virilio also concludes that space is currently losing its intelligibility as a result of contemporary technological developments. Virilio's arguments are based on his observations of newer military technologies capable of remotely destroying targets anywhere on the face of the earth. To describe the effect of these technologies, Virilio coins the term "DROMO-POLITICS," the struggle to possess not space but time. He writes, "Territory has lost its significance in favor of the projectile. *In fact, the strategic value of the non-place of speed has definitely supplanted that of place*, and the question of possession of Time has revived that of territorial appropriation" (46; emphasis original).

Foucault and Jacques Derrida (and also at points to Julia Kristeva, Roland Barthes, and Jacques Lacan), all of whom in their own ways stress language's constitutive role in constructing the identity and experience of its speakers. For Lefebvre, such formulations make intellectual labour "subject to endless division" (8) and "forever promot[e] the basic sophistry whereby the philosophico-epistemological notion of space is fetishized and the mental realm comes to envelop the social and physical ones" (5). In direct contrast, Lefebvre argues for an understanding of space which is not strictly geometrical, but one which plays an "operational or instrumental" social role as "knowledge and action, in the existing mode of production" (11).

Put another way, space in Lefebvre's view is not an empty plane of coordinates but a field of practice. It is constantly *produced*, not only by architects, engineers, and builders, but by the people who exist within it and engage it every day. By way of launching his investigation of these things, Lefebvre proposes a sort of variation on C.S. Peirce's semiotic triangle in which space is produced through a *spatial practice* (how people relate to their society's space with "a guaranteed level of competence and a specific level of performance"); *representations of space* (having to do with the work of planners and builders); and *representational spaces* (which, one might say, resembles the semiotician's concept of the "signified" in denoting the "complex symbolisms" which become attached to various spaces) (33). Taken together, the spaces produced at the intersections of these categories suggest that "(Social) space is not a thing among other things, nor a product among other products: rather, it subsumes things produced, and encompasses their interrelationships in their coexistence and simultaneity—their (relative) order and/or (relative) disorder" (73). Significantly, this produced space for Lefebvre is not itself narrated, but rather represents the conditions by which stories *within it* may be narrated and understood. Yet having said so, the theorist immediately suggests that there *is* a narrative story of Social Space, one which very urgently needs to be told: "It is the outcome of a sequence and set of operations, and thus cannot be reduced to the rank of a simple object. At the same time there is nothing imagined, unreal or 'ideal' about it as compared, for example, with science, representations, ideas or dreams" (73).

This dissertation is vitally influenced by Lefebvre's proposition that space, especially (but not exclusively) built space, is not an empty physical container for practice but is an entity *produced* in its use. It also accords with the concept that spaces can be historically categorized on the basis of the specific process of signification they involve. Where it parts with Lefebvre, however, is with his sense that a *reading* of the production of space, as he describes it, does civil society a disservice by implicitly aligning the critic with the forces of inertia against social change which she or he seeks to expose and critique. Reading as a way of divining knowledge, Lefebvre contends, is unable to account for the process by which the codes of its own intelligibility came to exist.[7] On this basis, he rejects the reading of space as a means of perpetuating the illusionary:

> When codes worked up from literary texts are applied to spaces—to urban spaces, say—we remain, as may easily be shown, on the purely descriptive level. Any attempt to use such codes as a means of deciphering social space must surely reduce that space itself to the status of a *message*, and the inhabiting of it to the status of a *reading*. This is to evade both history and practice. (7)

I argue, however, that the way the primary writings in this project engage the built spaces of civil engineering suggests that while inhabiting these spaces is indeed a kind of *reading*, it is not the reading of a coded yet unitary *message*. Lefebvre is unfair in speaking of this process as a type of reduction, for bridges, for their users, are sites at which notions of memory and passage are called into question and re-evaluated, and where people's relationships to both the physical and social worlds are periodically re-negotiated.

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[7] Lefebvre here positions himself in contrast to the formulation of the earlier Marxist thinker George Lukacs, who holds, in Lefebvre's estimation, that "space serves to define reification, as also false consciousness. Rediscovered time, under the direction of class consciousness elevated to the sublime level at which it can survey history's twists and turns at a glance, breaks the primacy of the spatial" (22). Lefebvre is not entirely in disagreement, but instead of wanting *the object of analysis* to be those impulses which help to overcome the primacy of the spatial, he concedes an essential primacy of determination *to the spatial*, leading him to concentrate his analysis on the spatial in its various iterations. As such, Lefebvre is extremely skeptical regarding the reading of spatial features, for readable spaces, he argues, are in fact "already produced," and "such a space implies a process of signification" (17).

More fundamentally, my objection to Lefebvre's formulation is one regarding the status of *process* in an analysis of meaning in built space. Lefebvre's analytical strategy acknowledges both that space as signifying field is produced through a process of sedimentation and reification which is itself historical, and also that we can distinguish a progression of different historical categories of space, such as Absolute Space, Abstract Space, Contradictory Space, and Differential Space. His goal, having ascertained these things, however, is to analyze them as timelessly coherent entities—as containers of inefficacious non-transformative motion—whose most significant meaning is that which lies outside of the process of their own narrating and being narrated. Thus, he insists on separating the reading of spaces from the comprehension of that historical production of signifying practices which renders spaces readable. The problem here is that these signifying practices are necessarily also narrative ones, and narrative is inherently *about* change and re-signification, despite Lefebvre's claim that it seems to accomplish very little of either in any constitutive sense. As I will show, *the built spaces examined in this dissertation are practiced in terms of the narratives they make possible.* These spaces of transportation are ineluctably about motion: by design and purpose, they are more fully perceived from a variety of different viewpoints, in the appreciation of the different sensations, experiences, or viewpoints they provide regarding the built and natural spaces they traverse, divide, and connect. It is true that bridges (as well as railway tracks, paths, and roads, and the machines which use them) are often depicted in non-fictional representations from fixed points of view, in order that people may be granted the pleasure of contemplating them as objects of aesthetic (even sublime) pleasure. Yet while this experience is theoretically available, we might term it only a secondary use of these structures, for their primary use as transportation links is only engaged as a movement from one place to another across time and space, one in which not all aspects of the structure or of the landscape surrounding it are experienced at any given time. Moreover, such perceptions are no less fictional than any other representational mode by which these structures and landscapes might be described. What this dynamic experience is about, then, is a process of *revelation*: a narrating of both structure and surroundings.

Accordingly, although intrigued by the potential insights generated by Lefebvre's insistence on the importance of everyday spatial practice to the construction of space, I am unsatisfied by the range of interpretations available to the critic of space operating under the aegis of his concept of production, as it cannot adequately account for the range of transformations which inform our very ability to imagine and perceive them in the first place. For example, one of the first works to introduce Lefebvre's ideas to the North American academy, even prior to his work's having been translated into English, was M. Gottdiener's *The Social Production of Urban Space* (1985).

As Gottdiener phrases it, "Space is both the geographical site of action and the social possibility of engaging in action" (123). In being such a slippery concept, the origins of a space thus defined are difficult to trace:

> It has both a material reality and a formal property which enables it to constrain the material reality of other commodities and their social relations. Just as other commodities, it represents both a material object and a process involving social relations. [Yet] it continually recreates social relations or helps reproduce them; furthermore, these might be the very same relations which helped produce it in the first place. (129)

The logical problem incurred here is that this description of space, based on evacuating transformations in time from the perception of space as field, that is, on *not reading*, is fundamentally unable to elucidate the "malleability" which seems spectrally to pervade this understanding. It is for this reason that Gottdiener cannot really flesh out his assertion that "only by seizing a space can an effective social praxis be realized" (284). In the midst of making his broad assertions about the dialectics of space, Gottdiener in fact ends up doing little to satisfy his ultimate goal, stated early on in the book, to "focus on the potential for the humanistic design of social environments, as yet untapped and unrealized, which can be made to guide the growth patterns of society—if a greater understanding of their malleability is accepted" (18).

Likewise, Soja's *Thirdspace*, inspired by Lefebvre's spatial triad, proposes that we examine "Thirdspace," defined as "a constantly shifting and changing milieu of ideas, events, appearance, and meanings" (2). Unlike Firstspace, which comprises only "a material and materialized 'physical' spatiality that is directly comprehended in empirically measurable *configurations* (74), or Secondspace, which only involves "spatial knowledge . . . primarily produced through discursively devised representations of space, through the spatial workings of the mind" (79), this Thirdspace is all-inclusive. For Soja, in fact,

> *Everything* comes together in Thirdspace: subjectivity and objectivity, the abstract and the concrete, the real and the imagined. . . . Anything which fragments Thirdspace into separate specialized knowledges or exclusive domains—even on the pretext of handling its infinite complexity—destroys its meaning and openness. (57)

Soja thus both identifies a need for a model which cathects space at the intersection of geometrical and imagined space, yet seeks to avoid developing any understanding of how specific processes and transformations in the first two spheres interact with one another to produce the third, for that understanding would not account for the underlying forces which allow signification itself to occur. In doing so, he defines his Thirdspace to exist in stability outside of the temporal process of its revelation to the observer— as he writes regarding his look at Los Angeles, "This tour cannot be done on foot" (19). As such, despite his intention to avoid absolutes and, using a "radically open perspective" (5) to trace shifting, ambiguous details, in my estimation Soja never directly grapples with the apparent desire for epistemological mastery inherent to this project. Despite his stated interest in how day-to-day practice figures in the production of space, his desired object of knowledge is a machine which functions independently of anyone's attempts to describe it—except for those able to separate themselves from its workings and view it, as if from a great height, as a coherent, already-produced entity.

In some cases, moreover, the trouble with taking a Lefebvrian approach is that unlike earlier Marxisms which proposed a clear sense of how injustice might be overcome, it can be unclear as to what meaningful resistance would look like. In "Race, Protest, and Public Space: Contextualizing Lefebvre in the U.S. City" (1999), for example, Eugene J. McCann extends Lefebvre's insights into the relations between spaces and modes of production into discussions of racial identities in American cities (particularly Lexington, Kentucky, site of civil unrest after the shooting of a black teenager by a white police officer in 1994). McCann, in taking up a Lefebvrian methodology, performs yeoman service in delineating how built urban spaces define, enclose, and police populations along racial lines and how oppositional discourses exist in relation to the conditions they critique, and I fully take his point that "representational spaces can be pulled apart from spatial practices and representations of space for heuristic purposes, but in the end they are mutually constitutive moments in a single process" (177-78). Yet in the end, there is something missing. Although McCann discusses in detail both practices and the built works of city planners, designers, and architects in producing the divided space of Lexington through an imaginative process of erasure (in one particularly glaring example, these officials adorned the city's old town square with a number of interpretive historical plaques, monuments, and statues, none of which mentioned that in the first half of the nineteenth century the square had served as a major regional slave market [170]), his discussion of how to re-figure the city to address these divisions becomes somewhat vague. As he puts it, "The right to the city is logically extended by the right to difference: the right to be free from externally imposed, pre-established classifications of identity" (181). This call for justice is certainly a language of transformation, but how the space will look and function after this change can only be described as a kind of general "freedom." The problem is that this theoretical model does not lead towards the possibility of such an existence without investment, without one's behaviour and identity always in some way being worked out in relation to a specific produced space. Transformation itself, it follows, is not the escape from any such dialectic, but is thoroughly implicated in, and constitutive of, any definition of space as field of practice.

As such, I depart from Lefebvre in contending that the process of sedimentation which renders a space readable is not easily (nor desirably) separable from the variety of impressions one might receive whilst perceiving—*reading*—a built space as an individual user. Analyses of these structures, though, both prior to and in the context of their engagement in literary texts, suggest that both history and practice are experienced as possible chains of connection between isolated images and impressions, not as the systematized sum of those connections. Put another way, Lefebvre's analysis is no less of an imagined fiction than those evasions of theory and practice of which he accuses semiologists, epistemologists, and literary-minded readers in general.

This discussion, in point of fact, echoes one of the twentieth century's most prominent debates over the relation of concepts of space and time in the study of literary texts. In "Spatial Form in Modern Literature" (1945), Joseph Frank argued that modern literature was "moving in the direction of spatial form," by which he meant that modernist writers "ideally intend the reader to apprehend their work spatially, in a moment of time, rather than as a sequence" (10). Yes, it was true that in order to understand the overall unitary form of a literary text one had to read it over time in a certain linear order (preferably that suggested by the sheer placement of words), but the goal for modernist writers was to encourage readers to proceed with "a space-logic that demands a complete reorientation in the reader's attitude toward language" (15)[8]. Although Frank was not an overtly Marxist intellectual, much like Lefebvre his goal was to elucidate a knowledge of static forms as primary units of meaning.

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[8] In a later essay titled "An Answer to Critics" (1977), Frank provided the following clarification, in the light of then-recent theoretical developments: "I stated what has become a platitude—and what I can now put in more precise linguistic terminology—that the synchronic relations *within* the text take precedence over diachronic referentiality, and that it is only after the pattern of synchronic relations has been grasped as a unity that the 'meaning' of the poem can be understood" (75).

Frank's critics, however, insisted that the fact that these supposedly static forms had to be perceived through a process of narration could not logically be overcome. In *The Sense of an Ending* (1967), Frank Kermode wrote that narrative is constitutively the basis of human perception, and that as human beings we are forever bound to locate ourselves both in time and in space through "plots," which he calls "not only concordant imaginary incidents, but all the other, perhaps subtler, concords that can be arranged in a narrative" (52). Kermode draws a distinction between fiction ("Fictions are for finding things out, and they change as the needs of sense-making change") and myth, a regressive form of fiction which "operates within the diagrams of ritual" (39); his sense of the implications of "emplotment" causes him to advance the following criticism of Frank's argument:

> Such concords can easily be called 'time-defeating,' but the objection to that word is that it leads directly to the questionable critical practice of calling literary structures *spatial*. This is a critical fiction which has regressed into a myth. . . . 'Time-redeeming' is a better word, perhaps. (52)

Our implication in a field of signification, it follows, can only ever be described at the site of its realization, a site which is necessarily both spatial and temporal.

Fixity and Progression in Other Theories of Space

A number of other significant models for the study of space, Marxist and otherwise, have lately been taken up in scholarly discussion; like Lefebvre, each of these approaches maintains that space cannot be conceived as a series of sheer geometrical coordinates, independent of the cultural mechanisms by which people experience it. While these models in various ways establish the centrality of the experience of space as a means of cathecting it, they mostly lack what for me is the strongest, most persuasive aspect of Lefebvre's model: an understanding of spatial practice which recognizes people's absolute ongoing implication in creating, not just experiencing or perhaps resisting, the spaces they inhabit. In fact, I contend that a theory which concentrates on the readability of space is necessary better to account for precisely this implication. While all of the writers discussed in this section in some way discuss how one can be either more or less aware of the aesthetic and political implications of one's physical surroundings, those theories which best take into account the series of impressions of space one experiences over time assist most in helping to discuss the readability of space.

The engineer David Billington (1983), developing a line of thought suggested by such writers as the 19th-century architectural critic Montgomery Schuyler and the great 20th-century bridge engineer David B. Steinman (see Chapter II for more on the latter), contends that the most aesthetically-pleasing "art of structural engineering" is not the product of architectural embellishment or of non-structural facades, but of "pure structure" designed by engineers endeavouring to make the lightest and strongest works possible under budget constraints.[9] For Billington, "whenever public officials or industrialists decided deliberately to build monuments where cost would be secondary to prestige this art form did not flourish. Economy has always been a prerequisite to creativity in structural art" (*Tower* 6). He holds that we instinctively find most pleasing in works of structural engineering those design features which clearly show how force is efficiently distributed throughout the structure; an example would be the bridgebuilder Gustav Eiffel's elegant steel arches which widen at the bottom to provide stability while narrowing at the top to resist wind. The problem with this argument, though, is that like Lefebvre (a Marxist whom the decidedly conservative Billington would likely regard with marked suspicion), this "art" can only be appreciated under the aegis of a fixed viewpoint which has little to do with the structure's intended *dynamic* function. While Billington's conception of structural art clearly has merit in helping people to appreciate the design achievements of great works of civil engineering, we must recognize that besides distributing structural forces such structures also distribute *people*, in space and over time. Part of their "art" is precisely the pattern of impressions resulting from such dynamic distribution.

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[9] Besides Billington's *The Tower and the Bridge: The New Art of Structural Engineering*, see also David P. Billington and Robert Mark, "The Cathedral and the Bridge: Structure and Symbol," *Technology and Culture* 25.1 (January 1984): 37-52.

Edward T. Hall, on the other hand, is very much interested in the tactile aspects of our interactions with the world, for "The relationship between man and the cultural dimension is one in which both *man and his environment participate in molding each other*" (4). Hall's *The Hidden Dimension*, first published in 1966, introduced the term "proxemics" to the study of space. For Hall, the world is experienced as a series of relative distances, and the problem is to be able to perceive sensation when so much of our technology (and, indeed, our deepest aspirations) works to shield us from sensory participation. Hall is quite critical, for instance, of the American automobile of the 1960s as opposed to the European: the former insulates the occupant from the texture of the road and instills a sort of complacency and distance from experience, whilst the latter transmits the road's imperfections so as to involve the occupant more acutely in a world of sensation. For Hall, Americans in big cities and their surrounding suburban communities "have less and less opportunity for active experiences of either their bodies or the spaces they occupy. Our urban spaces provide little excitement or visual variation and virtually no opportunity to build a kinaesthetic repertoire of spatial experiences" (59). What is missing in Hall's formulation, however, as opposed to that of some of the Marxist writers discussed above, is that the alienation engendered by built space is not primarily an alienation from immediate sensation but from narrative. Hall contends that "Man's entire organism was designed to move through the environment at less than five miles per hour"; at such a walking pace, an object such as a mountain "does not appear to move or rotate. Space and distance and the land itself have more meaning. As speed increases, sensory involvement falls off until one is experiencing real sensory deprivation" (165). Yet is such sensory deprivation equivalent to imaginative depravation? My argument instead is that different movements across space in time are, effectively, different narratives which are told to, and told by, the person in motion. If alienation is involved—as it very much is, at times—it is alienation from being able to imagine oneself as a reader in the midst of a story.

More recently, the philosopher Allen Carlson has proposed the framework for an aesthetic appreciation of both natural and built landscape as a means of living in it with awareness. This model explores how we might interact with our built physical surroundings gracefully and meaningfully instead of letting ourselves be dulled to experience and thus inured to mediocrity; to do so, it takes more fully into account notions of spatial function, not mere appearance. In "On aesthetically appreciating human environments" (2001), Carlson argues that instead of evaluating built features in urban areas with the language of fine-art criticism, we consider the notion of "functional fit" in beholding an area. In such a thoughtfully-integrated milieu, "there is an ambience of everything being and looking right or appropriate, an ambience of it *looking as it should*. It appears as if the whole were the result of 'natural' processes akin to the ecological and evolutionary forces that shape natural environments" (15). When viewed in this light, he contends, London Bridge, having been moved in 1967-8 from its original location to a constructed watercourse in the planned community of Lake Havasu City, Arizona where it no longer carries out any particularly practical function, becomes a mere "aesthetic absurdity" ("Everyday Architecture" 115).

One might expect Carlson's emphasis on harmony over discord would lead him to prefer bland design elements which fade into the background over those which are challenging and engaging, but in practice this is not at all the case. Instead, his interests lead him to make unexpected and trenchant analyses of such everyday things as the modern prairie landscape produced by industrialized farming methods. While others decry the loss of the family farm and the greater variety of aesthetic detail inherent to it, Carlson finds in the endless monocultural fields that "intensity of color and boldness of line combine with scale and scope to produce landscapes of breathtaking formal beauty: great checkerboard squares of green and gold, vast rectangles of infinitesimally different shades of gray" (*Aesthetics* 185).

Carlson, a philosopher, is not centrally interested as am I with the stories of people's dynamic progressions through space: for one, in the case of the relocated London Bridge, I would want to consider not only the absence or presence of pragmatic function but the relative meaningfulness of passage across the structure in each location; for another, I would be more interested in stories, such as those discussed here in Chapters IV and V, which address and perhaps seek to enhance the degree to which dynamic function connects bridge users with histories of construction workers and earlier users. However, this dissertation is again entirely inspired by and in accord with the notion that by using terms drawn from criticism of aesthetics we can theorize ways of experiencing space which promote greater degrees of personal and social implication in everyday experience.

In contrast to Billington, Hall, and Carlson, the Marxist thinker Walter Benjamin was concerned among other things with the way that movements resulting both from built space and from spatial practice helped to construct fellow-feeling in urban citizens, and thus to locate people meaningfully in history. It is not difficult to see how this project stems from an interest in the development (or lack thereof) of class consciousness in the nineteenth century. In "On Some Motifs in Baudelaire," Benjamin holds that "To move in this crowd was natural for a Parisian. No matter how great the distance which an individual cared to keep from it, he still was colored by it and, unlike Engels, was not able to view it from without" (167). As a result of the crowd's gradual disintegration throughout the nineteenth century in the midst of mechanical transportation developments and increasingly open public spaces, "The feeling of being dependent on others, which used to be kept alive by need, is gradually blunted in the smooth functioning of the social mechanism" (174). So *smooth functioning*—the language of civil engineering—can in some cases isolate people from one another and alienate them from meaningful social interaction. One such example, interestingly enough, is the construction of bridges, for "Baudelaire's Paris preserved some features that dated back to the happy old days. Ferries were still crossing the Seine at points that would later be spanned by the arch of a bridge" (172). Benjamin's way of thinking, in considering the effect of built space not as container but as staged movement, brings to light some important considerations for this dissertation. People moving together, says Benjamin, produce history, so one way by which political regimes attempt to maintain themselves is by constructing spaces which prohibit a sense of common advance. The effect of a built structure, it follows, can be de-narrativizing in particular contexts.[10]

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[10] In fact, in the gear-and-girder age, such de-narrativizing by bridges is often a matter for celebration. As Leo Marx points out, "No stock phrase in the entire lexicon of progress appears more often [in the later 19th century] than the 'annihilation of space and time,' borrowed from one of Pope's relatively obscure poems ('Ye Gods! annihilate but space and time/And make two lovers happy'). The extravagance of this sentiment apparently is felt to match the sublimity of technological progress" (194). See also this dissertation's comments on Abram Hewitt's assessment of the Brooklyn

Benjamin is particularly concerned with how nineteenth-century built spaces gradually helped create an "homogeneous empty time." In this mode, people move together in space, yet their movements do not produce the feeling of moving forward in history. Time, though forever ticking onward, becomes emptied of any sense of social significance: today, although technologies such as radio and fibre-optic communications allow one to set one's wristwatch to the exact same time as a person in the same time zone many miles away, the resulting knowledge of absolute simultaneity for Benjamin brings one no sense of shared common experience. Technologies of space often work similarly: the design and practice of a contemporary shopping mall (a field of reduced-stakes spatial practice designed to blur the conditions underlying decision-making itself in order to ease the process of material accumulation) allows people all over North America to have remarkably similar experiences at once, yet there is no resulting sense of these coordinated physical movements adding up to a common Movement. (On the other hand, of course, in *Imagined Communities* [1983], Benedict Anderson famously reverses this concept, declaring that Benjamin's homogeneous empty time does not destroy community but redefines and strengthens it, so that people can now feel themselves citizens of nations with affinities and shared experiences with

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Bridge in Chapter I and Chapter IV.

people they will never meet in all corners of sovereign state landmasses.)

In any event, Benjamin's thoughts here suggest that built space does not always take a narrative form, but may be read productively according to whether it does or does not involve people experiencing stories about their changing interrelationships. Space, in other words, becomes intelligible only according to the ways in which it re-organizes time. In a brief note in the midst of his research for his enormous and fascinating study of Paris in the nineteenth century, Benjamin, with his eye for the mythological ramifications of modifications of space, notes the following idea in J.J. Grandville's *Un autre monde: transformations, visions, incarnations . . . et autre choses* (Paris: H. Fournier, 1844): "'Charon . . . ruined by the installation of a wire footbridge over the Styx" (*Arcades Project* 153). If only Benjamin had been able to pursue this idea further! As it is, it hints at how much Benjamin (much like T.S. Eliot, as discussed here in Chapter IV) thought modern built spaces alienated people from the social and mythological mechanisms which, upon being reclaimed, were the stuff of freedom.

For the geographer Yi-Fu Tuan, however, memory is not created by the functioning of space, but the other way around. His *Space and Place: The Perspective of Experience* (1977) redefined notions of "space" and "place" in such a way as significantly to influence the entire field of Geography to this day.[11] According to Tuan, "'space' is more abstract than 'place.' What begins as undifferentiated space becomes place as we get to know it better and endow it with value" (6). Space is an expression of geographical coordinates, while Place is created by human efforts to make space habitable:[12] "The human being, by his mere presence, imposes a schema on space" (37). For example, "The picture of a road leading to a distant cottage seems easy to interpret; yet the road makes full sense only to someone who has walked on it" (22). Tuan thus describes a world in which dynamic modes of habitation allow meaningful perception and involvement. As he argues near the beginning of *Space and Place*, "It takes time and practice for the infant or the person born blind but with sight recently restored to perceive the world as made up of stable three-dimensional objects arranged in space rather than as shifting patterns and colors" (12).

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[11] As recently as 2001, a large collection of scholarly essays directly inspired by Tuan's ideas, *Textures of Place: Exploring Human Geographies*, was published. In an article in this volume entitled "Peripatetic Imagery and Peripatetic Sense of Place," Paul C. Adams holds that "place-experience is not binary, a simple matter of knowing and not knowing; knowledge arises from actions, and place-experiences thus present innumerable shades of differentiation depending on what one is doing in a place" (186).

[12] In *The Practice of Everyday Life*, as it happens, Michel de Certeau neatly reverses Tuan's definition of these two terms while saying something very similar. In de Certeau's formulation, the concept of *place* is related to the enterprise of mapmaking: *place* comprises "an instantaneous configuration of positions . . . imply[ing] an indication of stability." *Space*, on the other hand, is "composed of mobile elements" (117); much like Lefebvre, de Certeau argues that "*space is a practiced place*" which "occurs as the effect produced by the operations that orient it, situate it, temporalize it, and make it function in a polyvalent unity of conflictual programs or contractual proximities" (117).

Similarly, in *The Poetics of Space* (1958), the philosopher Gaston Bachelard also suggests that in order to read any given space we must consider the means by which it has previously been domesticated and inhabited. For Bachelard, space is actually a series of temporal fixities created by human memory:

> Through dreams, the various dwelling-places in our lives co-penetrate and retain the treasures of former days. And after we are in the new house, when memories of other places we have lived in come back to us, we travel to the land of Motionless Childhood, motionless the way all Immemorial things are. We live fixations, fixations of happiness. (5-6)

We perform each new action, Bachelard argues, with the benefit of this imagination, for "Space calls for action, and before action, the imagination is at work. It mows and ploughs. We should have to speak of the benefits of these imaginary actions" (12). It may not be immediately apparent, but Bachelard's formulation does have some applicability to a poetics of non-domestic public spaces. Although we are never at home (in the sense of possessing private property) while crossing a bridge, our memories of past crossings become part of the language by which we inhabit this space. However, as the experience of crossing a bridge elicits not a series of overlaid memories of a geometrically-stable fixed location but a particular series of images drawn from succession of spaces, I suggest that we need to replace the concept of conceptual fixities with that of narrative outlines better to grasp how experience is constructed outside of our dwellings.

Tuan's work, by examining what steps people may take in order to transform space into place, is better able to account for shared social codes by which space is experienced, and from these codes is able to produce histories and local specifics of cultural fields of spatial experience. For instance, he suggests that "What distinguishes Western technological society is that its built environment, which is pervasive and dominant, nonetheless has only minimal cosmic or transcendental significance" (114); writing about Minneapolis, Tuan notes that while "When the city's Foshay Tower was completed in 1929 its owner saw fit to invite the governors of the forty-eight states to attend its opening ceremony," some years later when the IDS building, the tallest skyscraper in the city, was finished in 1972, "its opening passed with little fanfare" (174). To the extent that certain spaces are ritually sanctified, this suggests, they are increasingly done so through other means than the ceremonial gathering. Tuan's thoughts therefore have highly suggestive implications for this dissertation's consideration of spatial practice as narrative. At one point, he considers that "When we stand before a prospect, our mind is free to roam. As we move mentally out to space, we also move either backward or forward in time. Physical movement across space can generate similar temporal illusions" (125). What at first appears to be a set of practices by which people comprehend and inhabit space turns out to be the story of the development of those very practices, for they necessarily engage time—and are only useful and effective to the extent that they are *about* time and progression.

Semiological Approaches to Reading Space in Barthes, Eco, and de Certeau

Again, this dissertation's contention is that we can best account for how space is arranged to produce certain stories as people move through it—and can therefore better theorize the agency and responsibility of users of space—by considering how space can be read. Some have proposed that built spaces which are more coherent, more *legible* as to their layout and intentions, are most empowering and meaningful to their inhabitants. In his influential *The Image of the City* (1960), for instance, the urban studies scholar Kevin Lynch proposes to "concentrate especially on one particular visual quality: the apparent clarity or 'legibility' of the cityscape" (2). For Lynch, "Just as this printed page, if it is legible, can be visually grasped as a related pattern of recognizable symbols, so a legible city would be one whose districts or landmarks or pathways are easily identifiable and are easily grouped into an over-all pattern" (2-3). This concept of legibility seems inadequate, however, for describing the ways in which people moving in space help to construct it: it suggests that the fullest experience of the city comes in being able to comprehend an urban landscape's layout as a coherent whole, so that one can know exactly the effect of traversing it in advance. Moreover, an apparent desire for mastery underlies this formulation which bears some critique: people will be empowered, in Lynch's estimation, when the landscape is laid bare of secrets before them, fully available to the eye.

In contrast, by examining how spaces become *readable*—that is, become meaningful through the active interaction of writer and reader, as patterns of impression and reflection which can be very different in repetition—we look not for how people develop mastery over built space, but for how they inhabit such space by translated the not-quite-graspable meaning of successions of images into ever-changing stories. Based on the kinds of storytelling surrounding 20th-century transportation technologies (both those wrought in steel and concrete and those written on paper), Umberto Eco and Roland Barthes establish the most persuasive model for analyzing the various transformations in signification obtaining to built structures. Eco, in "Function and Sign: Semiotics of Architecture" (1968; 1986), makes a notable attempt to bring semiological analysis into the realm of architecture, in order to prove the hypothesis that semiotic study could be "a science studying *all* cultural phenomena *as if* they were systems of signs" (57). For Eco, architecture communicates as the sign of its functions to its users, for, quite simply "According to an immemorial architectural codification, a stair or a ramp denotes the possibility of going up." There is no architecture (or, to extend his insights, no engineered space or means of conveyance in general) without action, and thus without narrative; in Eco's estimation, "one finds oneself before a form whose interpretation involves not only a codified connection between the form and the function but also a conventional conception of how one fulfills the function with the form" (62). We read all architecture as potential narrative, that is, as process to be fulfilled; moreover, we already have expectations about which functions architectural devices—doors, stairways, passages, and so on—can perform.

In his essay "The Eiffel Tower" (1957), Barthes takes such insights much further, as far as exploring the potential transformations inherent to the functions of architecture. He comments that the Tower is a kind of transcendental signifier; it can be seen from anywhere in Paris, so he and his friends in the city "comprise a shifting figure of which it is the steady center" (3). The Eiffel Tower's universality is not only the result of its physical location, however, but of its capacity *to become meaningful*. The Tower, Barthes observes, "attracts meaning, the way a lightning rod attracts thunderbolts" (5), for "The pure—virtually empty—sign—is ineluctable, *because it means everything*" (4; emphasis original).[13] So far, Barthes' observations are more or less Lefebvrian: his Eiffel Tower as built space is prior to all meaning, people move in relation to it without affecting its status as stationary object, and that as "the only blind point of the total optical system of which it is the center and Paris the circumference" (4), it resists being read as meaningful object itself.

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[13] Barthes' point—quite well taken—is that as a sign the Tower is so empty because it only exists as a monument to itself, not for any real practical purpose: "the Tower, almost immediately disengaged from the scientific considerations which had authorized its birth (it matters very little here that the Tower should in fact be useful), has arisen from a great human dream in which movable and infinites meanings are mingled: it has

However, complex ambiguities arise in Barthes' argument as he describes the spatial experience of the Tower *in time*. By insisting on describing this built object as experienced dynamically, Barthes is able to expose a multi-faceted transformation involving object, citizen, and city:

> But in this movement which seems to limit it, the Tower acquires a new power: an object when we look at it, it becomes a lookout in its turn when we visit it, and now constitutes its object, simultaneously extended and collected beneath it, that Paris which just now was looking at it. (4)

In this passage, the Tower itself both is transformed from object into lookout, and transforms the city of Paris from local texture into landscape. While from a distance the Tower looks relatively solid, at close range it reveals itself as mere skeleton, and "you cannot visit the tower as a museum: there is nothing to see *inside* the tower" (7). This passage is also one, paradoxically, both from culture into nature ("the Tower makes the city into a kind of nature; it constitutes the swarming of men into a landscape, it adds to the frequently grim urban myth a romantic dimension" [8]), and from isolated moment to

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reconquered the basic uselessness which makes it live in men's imagination" (7).

location within an historical continuity: "through the astonishment of space, it plunges into the mystery of time . . . it is duration itself which becomes panoramic" (11), a contradiction Barthes calls the "complex, dialectical nature of all panoramic vision" (10). Instead of seeing the Eiffel Tower as an already-produced space reinforced, but not constituted, by practice, Barthes opens up a field of experience which is itself produced precisely through the transformations it engenders. As a particular built space, it is "a Gateway, it marks the transition to a knowledge" (14).

Barthes' observations here, as I have said, stem from his commenting on the Tower as experienced progressively over time. This viewpoint is hardly a mere fiction, for it speaks both to the way it is actually experienced, always by people in Paris, and also to the experiences it was explicitly built to produce. The Tower may be meaningless scientifically, but as a vertical construction in an area previously occupied by much shorter structures, it takes part in a pre-existing dramatic genre of placing the human eye at a height in a position of domination. I use the word *dramatic* intentionally here, for the Tower, like all towers that can be climbed, does not only place viewers at a height; it also places viewers *who are used to being much lower* at a height. Put another way, its effects are neither instant, nor do they erase the memory of their having occurred—in fact, the appeal of the Tower is entirely based on memory, the memory of being on the ground, the memory of being transformed.

Bridges are implicated in precisely such dramatics. Yes, it is true that bridges often are far higher than the immediate ground level, and thus like towers also provide a panoramic viewpoint to viewers. Yet more consequentially, as argued above, while they can be viewed from a fixed viewpoint to one side (and as thus represented attract a range of meanings regarding civic pride, the success of the engineering profession, and so on), their main function is that of allowing passage from one place to another which would not be possible otherwise. While this passage is easier to make than fording waterways or taking ferry boats, it is not instantaneous; its drama is the unfolding of both the structure's own physical features and the changing views of the surrounding landscape. For those who use them, the drama bridges create depends on both time and memory.

Michel de Certeau's work on reading and writing as spatial practice helps further open up the question of how this drama may be read as narrative text. His *The Practice of Everyday Life* (1984) proposes a detailed methodology for appreciating how power is imposed and resisted within modern administrative regimes, one which revolves around the concepts of writing and reading in space. "In the technocratically constructed, written, and functionalized space in which the consumers move about, their trajectories form unforeseeable sentences, partly unreadable paths across a space" (xviii), he writes. In "Walking in the City," de Certeau develops his thoughts by reflecting on the view made available by the observation floor of the World Trade Center in New York: this view proposes the space below as essentially organized, frozen, and perceivable, thus "constructing the fiction that creates readers, makes the complexity of the city readable, and immobilizes its opaque mobility in a transparent text" (92). Yet while this view makes the city *readable*, for de Certeau it is not an instance of *writing*, a somewhat different matter. Writing, instead, is what the walkers of the city do far below as they move about, "follow[ing] the thicks and thins of an urban 'text' they write without being able to read" (93). Reading is possible here only when time is apparently frozen, while writing is a process which occurs only in (and is only about) tiny yet individually palpable histories. Elsewhere, in a chapter titled "Spatial Stories," de Certeau contends that the point of such individual engagements is to inhabit space by marking out individual and collective boundaries, ones "whose essential narrative figures seem to be the *frontier* and the *bridge*":

> The *bridge* is ambiguous everywhere: it alternately welds together and opposes insularities. . . . [A]t the same time as it offers the possibility of a bewildering exteriority, it allows or causes the re-emergence beyond the frontiers of the alien element that was controlled in the interior, and gives ob-jectivity [*sic*] (that is, expression and re-presentation) to the alterity which was hidden inside the limits. (128)

Bridge-writing thus always engages in a dialectic of known and unknown, for these concepts are precisely those which make *passage* intelligible.

However, I suggest that de Certeau's model errs in making too clear a distinction between reading and writing, and in doing so ultimately grants full legitimacy to the very techniques of power and control he critiques. It prohibits its followers from discussing democracy itself, or, for that matter, any form of collective, collaborative social organization: we are either tyrants in thrall to the scopic drive or resistant individuals concerned with preserving our right to reflect in disconnected isolation. Reading and writing, I instead suggest, are indeed separate activities, but each requires the other as a condition of its very existence—both in terms of the printed page and of the built space. Moreover, the same people can be both readers and writers at separate times; as Barthes might have pointed out were he still alive in 1984 to read de Certeau's work, like the viewers at the top of the Eiffel Tower, the people standing at the top of the World Trade Centre's observation deck were not born there but arrived after having first walked the streets. The meaning of such a view is only compelling to those who have already seen or imagined the streets from below—moreover, the experience of the street is potentially enriched by having had the opportunity to view it from a height.

This is not only a matter of semantics. De Certeau himself claims that the divisions between reading and writing are artificial fictions of control and need to be broken down: in his chapter "Reading as Poaching," he argues that "What has to be put in question is unfortunately not this division of power (it is only too real), but the assimilation of reading to passivity. In fact, to read is to wander through an imposed system (that of the text, analogous to the constructed order of a city or supermarket)" (169). Yet merely holding that reading is a more active process which collaborates with writing to produce meaning does not alter writing's status as an attempt at control separate from reading which must be resisted in some way. By not addressing the fact that the same people can occupy both positions, de Certeau, very much unlike the Marxist thinkers discussed above, effectively absolves the polity of responsibility for social and spatial practice. Because the viewpoint of power ultimately has no control over what's supposedly *really* important—the covert, individualized histories in the minds of the walkers far below—there's no need for the dialectic to be challenged. Or, if a challenge is made in the form of violence, as it was in the attacks on the World Trade Center of September 11, 2001, this line of thought can unambivalently reduce the event to the sheer destruction of a corrupt fantasy, of an evil symbol of inequality and inequity—an approach which diminishes the very real human tragedy of such events.

These grandiose structures, moreover, while not always paid for directly by the public, are subject to planning schemes lying under the purview of democratically-elected governments and are often celebrated collectively as expressions of civic pride (even if this pride is a form of hubris directed toward phallic evocations of the might of the capitalistic enterprise in which the public participates). The problem is not the impulses underlying these constructions are unambiguously noble and democratic—de Certeau has a valid point regarding our fantasies of being able to read and thus possess one another, and I am very much persuaded by his sense that reading and writing, and the connections between them, involve a tension between the covert and the work of making-visible. However, in order to theorize any spatial practice which can counteract social inequalities and find for ourselves the agency to participate meaningfully, progressively, and gracefully as members of communities, both locally and interculturally, we must acknowledge the complicity of the general public in creating these fictions, corrupt or not.

The crossing of each bridge offers the following paradox: a bridge functions on the condition of condensing an endless series of possible trajectories through space into a *choice* which others must then follow; yet, since post-Renaissance bridges on both sides of the Atlantic only rarely contain housing or commercial space, one is never at home on a bridge. It is no destination, only a transitional route where one is most often in motion. This potential for transition, at least in part, makes bridges particularly compelling to drivers and pedestrians: as the urban critic Jane Jacobs put it in *The Death and Life of Great American Cities* (1961), in using urban space "Almost nobody travels willingly from sameness to sameness and repetition to repetition, even if the physical effort required is trivial" (129). Bridges are, once more, sites of re-signification: we, and our perceptions of the structures themselves and the world around them, change as we experience them.

Reading Bridges Through Written Narrations

Up to now, this chapter has suggested that space is very much readable, and that by considering our readings of narrated spaces we can develop better-realized knowledge of how the technologies of the last century and a half have conditioned our perceptions. By thinking along these lines, it has argued, we can better consider those practices which enable, enrich, constrain, commodify, or obscure our experiences in built space. In a broader and more profound sense, this methodology helps us find ways to experience the conceptual and aesthetic grace and dignity of everyday experience in space—and to be able to object coherently when these things are denied us. What role, if any, can or should the reading of fictional texts play in this critique? Why not write a dissertation which would simply read a series of built spaces themselves as narrative texts? After all, in his biography of David B. Steinman, one of the two or three greatest bridge engineers of the 20th century, William Ratigan writes that because mid-twentieth-century bridgebuilding involved "the development of structural forms that are inherently beautiful," the engineer of this time "has to be both engineer and poet" (142). For Ratigan, Steinman is that "poet-engineer," and his elegant St. John's bridge in Oregon (built 1929-31) is best described as "a poem stretched across the river" (199). Can we not therefore just read the narrative told in a walk or drive across a bridge and be done with it?

My answer would be yes, but only to a point. This dissertation's contention, as above, is that among the other things they do, fictional writings *make readable* the narratives of these structures; they must do so because for writers of fiction and non-fiction alike, *built space delivers a message, but an inchoate one*. This message, it becomes apparent, is both an evocation of our connections to the ghosts of builders and past users of the same structure, and a challenge to consider what our own crossing might mean. These two things seem different but are not, because crossing is a community activity, a matter of tradition—and as will become apparent especially in Chapters III and V here, at times a question of insiders and outsiders. Much writing about bridges persistently seeks a language to bring these ghosts to life and to assess how we ourselves might be meaningfully transformed in our crossing: to write the experience of built space is necessarily to translate. An obvious example of this making-readable through writing is Minneapolis, Minnesota's Irene Hixton Whitney Bridge, built in 1988, which joins a sculpture garden to a park over a freeway near the edge of the city's downtown. This bridge includes a short lyric by the poet John Ashbery, a meditation on the notion of passage spelled out in bronze letters along the length of the span and thus legible only to those who walk along and read. "But the tail end of the movement of the movement is new. /

Driving us to say what we are thinking," writes Ashbery. As we read, these lines imply, we are pulled along the passage on foot; as we stroll along, we are moved to translate our impressions into language. Ashbery is quite clever about this, however, urging his walker/readers to reflect that his bridge "is so much like a beach after all, where you stand / and think of going no further. / And it is good when you get to no further. / It is like a reason that picks you up and / places you where you always wanted to be." The irony of such a feeling of contemplation at rest is that the readers apprehending it are walking along the whole time. At just about the point one is reading the line "Here it is. Steel and air, a mottled presence" at the poem's conclusion, one is reaching the very end of the span. "It" in this case cannot be the bridge as mere object: people, it strikes me, would be more likely to say "well, here it is" when first seeing it in side profile from a distance, or when approaching it while about to cross, or perhaps when stopping in the middle to take in the sense of being fully into the structure, not at the moment when they are about to disembark and go along their way as the bridge recedes behind them. Ashbery's "it," in other words, is not the physical fact of the structure, but the experience of having crossed it while reading.

This poem is not without precedent: it is only a particularly acute, literal instance of a type of writing for which there is evidence of a long and varied history. English-language fictional writing about bridges has been around for a long time. Sin and Death build a bridge from hell to earth in

Book X of Milton's *Paradise Lost*; a scene in Byron's *Childe Harold's Pilgrimage* takes place on Venice's Bridge of Sighs; Wordsworth's famous sonnet describes a peaceful early-morning reflection on London's Westminster Bridge; and Thomas Babington Macaulay's "Horatius" (1842), in which a bridge is bravely defended in battle, was taught to generations of British and British-Empire schoolchildren. Yet for writers of the gear-and-girder era such as Rex Beach, Willa Cather, and Hart Crane, whose bridges were not ancient, seemingly permanent features of the landscape but breathtakingly new, unprecedented means of passage, there was new urgency to the question of what the "poem stretched across the river" actually *says*. Again and again, as we shall see, these authors refer to bridges as cryptic messages, written in steel and concrete, replete with the promise of . . . *something*. *Promise*, of course, implies narrative, in the sense that it speaks of a possible transition from one state to another. Because writers of fiction create texts which discover intellectual, moral, or emotional coherence in the juxtaposition of events in an order, in pursuing a reading of bridges through their evocation in narrative texts we can learn much about how these structures function in people's lives.

All theories of narrative hold in common that one general function of narrative is to add the element of time to static objects. Paul Ricoeur's *Time and Narrative* (three volumes published respectively in 1984, 1985, and 1988), for instance, argues that narrative is the art of spatially uniting disparate phenomena, an act which necessarily takes time. "But what is it to be perceptive of resemblance if not to inaugurate the similarity by bringing together terms that at first seem 'distant,' then suddenly 'close?'," he asks. Apparently, we can identify a collection of events as a narrative by apprehending the conceptual movement of things in time across space, for "It is this change of distance in logical space that is the work of the productive imagination" (x). As such, in Ricoeur's famous formulation, "*The world unfolded by every narrative work is always a temporal world*" (3; emphasis added). In other words, he goes on, "time becomes human time to the extent that it is organized after the manner of a narrative; narrative, in turn, is meaningful to the extent that it portrays the features of temporal existence" (3).

The Canadian philosopher David Carr (1986) extends Ricoeur's insights regarding narrative to cover all of human experience, not just that which is intentionally related or understood as story. Ricoeur, in Carr's view, is "speaking of what is accomplished by *literary* narrative (both historical and fictional). Our contention is that this same accomplishment occurs every time we experience and act" (65). For Carr, seemingly solid objects, to the extent that human beings perceive their existence, are *experiences, experienced as stories*. As he puts it,

> I can explore with my eyes or hands an object (say a statue) which we would designate not an event but a thing. But my visual or tactile observation of it is itself an event with its own

> duration, its own beginning, middle, or end. (48)

Or, as Mieke Bal suggests in *Narratology* (1980; 1997), "Like semiotics, narratology applies to virtually every cultural object. Not that everything 'is' narrative; but practically everything in culture has a narrative aspect to it, or at the very least, can be perceived, interpreted as narrative" (220). Once more, for many thinkers it is possible to account for objects in space as narrated, and narrating, tales.

But more profoundly, according to these theories of narrative, storytelling becomes intelligible through the making of temporal delimitations. According to Bal, "a *text* is a finite, structured whole composed of language signs. The finite ensemble of signs does not mean that the text itself is finite, for its meanings, effects, functions, and background are not" (5). Narrative is a means of establishing coherence, through the choosing of a path with a beginning and end, in the midst of ambivalent flux. Narrative not only makes time legible; it also makes legible those times which obtain to objects and built spaces, by providing readers with conceptual pathways by which to navigate said times and spaces. It does so in part by foreclosing on possible ways of crossing, and by re-interpreting ways of crossing which have been narrated previously.

In order to consider the question of how fictional writing helps make bridges readable as narratives, let us discuss Katherine Paterson's young-adult novel *Bridge to Terabithia* (1977). This book is not about any particular vehicle or train bridge, but about two young people who, in creating an imaginative world for themselves to inhabit on a bit of wild land in a rural area, must find ways of crossing a stream to their remote outpost. Jess Aarons, a blue-collar boy from a backwater town near Washington, D.C., lives in a mildly reactionary, anti-intellectual world which looks down on "hippies" and "peaceniks" and where "Most of the boys swore that watching the Washington Redskins on TV was their favorite hobby" (33). Jess, however, harbours a secret creative side: he quietly worships his folk-singer music teacher at school and loves to draw. His drawings, in fact, are often precisely about the impossibility of traversing open spaces: near the outset of the book, we find that in his pictures "he liked to put his beasts into impossible fixes" such as depicting a hippopotamus "just leaving the edge of the cliff, turning over and over—you could tell by the curving lines—in the air toward the sea below" (10). Suddenly, a new girl moves into his life. Leslie Burke is from a middle-class family of professional authors. Soon, while exploring her parents' property, the two young friends discover a rope hanging over a creek bed and take turns swinging across; they come to call the land on the other side "Terabithia," a place "so secret that we would never tell anyone in the whole world about it" (38). Tragically, however, in the midst of a rainstorm during the week after Easter, the rope breaks while Leslie is swinging on it alone and she falls to her death in the swollen creek. In a fit of grief a day later, Jess throws all of his paintings into this creek.

The next day, as the sun shines, Jess crosses over the creek to Terabithia on a fallen branch, although he is unsure that the other side *is* still Terabithia, "If it could be entered across a branch instead of swung into" (119). His little sister, having surreptitiously followed him, loses her nerve while crossing the branch and he must assist her in her passage. A few days later, Jess, using borrowed lumber, erects a simple timber bridge over the creek and then leads his sister across "the great bridge into Terabithia—which might look to someone with no magic in him like a few planks across a nearly dry gully" (128). Together, they cross on the planks. It is clear, however, that this particular wooden Bridge to Terabithia is not the only Bridge to Terabithia in the book; more accurately, one ventures, it is the culmination of a process, and is as much a sign for this process of becoming as it is a sheer physical means of transport.

Here, then, a physical bridge replaces an imaginative journey across water to a distant land. On one hand, we can acknowledge that the particular way this novel treats its narrative arc of hope, discovery, suffering, redemption, and self-knowledge is deeply conditioned by the spaces its characters inhabit. M.M. Bakhtin's notion of the *chronotope*, the "time-space" of narrative, is somewhat useful for helping us to explore the ways in which space and time are engaged in fiction. For Bakhtin, such chronotopes "are the organizing centres for the fundamental narrative events of the novel. The chronotope is the place where the knots of the narrative are tied and untied.

It can be said without qualification that to them belongs the meaning that shapes narrative" (250). A Bakhtinian reading of *Bridge to Terabithia* would emphasize the degree to which the bridge Jess builds at the end is not predestined, but an attempt to redeem the consequences of a purely accidental tragedy. Leslie's death is not the preordained sacrificial benediction to the great bridge which must be built to complete Jess' coming-of-age; rather, his coming-of-age is his ability to accommodate the unpredictability of events. His final wooden bridge is certainly a defined trajectory in the midst of directionless flux, but a trajectory which only comes into existence, in effect, through markedly chaotic processes.

So far so good, as far as the inward process by which space and time are incorporated into fiction. But what of the outward process by which the novel's fictional engagement with time and space becomes a means of perception of the "real" world?[14] In telling the story just described, I argue, *Bridge to Terabithia* makes readable the stakes which obtain to making passages in space through air, across water. Bridging, we see here, is an act of easing a passage which had been impossible or extremely dangerous, a narrative process in and of itself. The physical bridge here needs not only to be imagined as object, but needs to be imagined as the passage between two states of mind (the characters' day-to-day and fantasy worlds). However, it is not only a case of imagined idea being realized as built object, for this bridge is in fact a kind of recording of the physical passage made by the two young characters' bodies through the air prior to its realization: the physical motion of the passage itself pre-dates the structure; the movements of human bodies are sources of storytelling.

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[14] Intriguingly, Gerard Genette asserts that in describing a series of events (including the perception or transformation of spaces) over time, the fictional narrative develops *its own* spatiality. For Genette, "The temporality of written narrative is to some extent conditional or instrumental; produced in time, like everything else, written narrative exists in space and as space, and the time needed for 'consuming' it is the time needed for *crossing* or *traversing* it, like a road or a field. The narrative text, like every other text, has no temporality other than what it borrows, metonymically, from its own reading" (34).

Conclusion

Storytelling, as I've implied above, always occurs in a context of existing narrative modes, generated alongside the construction and cultural accommodation of challenging new built spaces. As it is, *Bridge to Terabithia*, along with the things it does on its own, has precedents in a century's worth of fictional writing about the use and effect of modern bridges. *Each telling, this dissertation will demonstrate, in making a structure newly readable at a particular phase of its existence, in turn opens up areas of inquiry which create the basis for later tellings*. Besides evaluating the modes of narration in the different phases of a bridge's existence in the light of those which immediately precede them, we can also compare them with their manifestation in literary traditions of other times and places. To understand how fictional writing helps makes space readable, in other words, we need not so much compare it to the sheer physical details of the structure it describes as consider narratives of various phases of bridges' historical existence in the context of narrative frameworks from other genres, times, and national traditions. What ends up being described in this dissertation is not a strict unbroken chronological line of development, but a looser progression of progressions that unfold differently over the lives of individual structures, even in the context of an overall history of the gear-and-girder age in general. In doing so, it replaces Lefebvre's model, in which there is an historical development from Absolute Space to Abstract Space to Contradictory Space to Differential Space, with one in which there is an historical progression from built space narrated as the permanent achievement of a single mind (Chapter II), to that narrated as the achievement of a new community standard of practice at the cost of human life (Chapter III), to that narrated as metaphysical portal into past and future (Chapter IV). Chapter V, in examining the archival history of one particular structure, Edmonton, Alberta's High Level Bridge, over ninety years of its existence, finds evidence of all these ways of telling, manifested both in fictional texts and in the ideas of city planners and politicians. It also describes a further phase of a bridge's existence: the point where, after having become something of a metaphysical portal, it transforms into a living museum.

II: 20th-Century Bridge Construction as the Final Achievement of Human Destiny in Steinman, Beach, and Cather

As argued above, by building on Barthes' ideas about reading built space as signifying field of transformations, we can both read the immediate experience of given bridges and also account for the different stories which emerge as individuals use these structures multiple times over the years. A wider culture of spatial practice underlies our personal experiences of these passages, a culture which is in its own way historical and subject to continuing change. To the degree that spaces are readable, that is, there is a *literacy* of space: both the personal stories of our own history of spatial practice and the shared stories of crossing we tell each other profoundly condition—indeed, in large part demonstrably create—the meaning of our passage as we cross. By reading these structures not on their own but through other writings, we can begin to outline the histories of storytelling which sustain each bridge.

As such, in order to consider how narrative writing about bridges helps make them readable and establishes a literacy of spatial practice, we need to look at the specific narrative patterns associated with given bridges at particular times, consider what transformations they find in the act of crossing, and identify the new possibilities for meaning they suggest. One approach to this is David E. Nye's argument in *American Technological Sublime* (1994) that in the gear-and-girder-era, it was while viewing not natural wonders but great works of engineering that Americans encountered the sublime. For Nye, this "essentially religious feeling," one which no words could ever quite capture, represented "a way to reinvest the landscape and the works of men with transcendent significance" (xiii). He provides a variety of persuasive evidence regarding how widespread the sublime response to technology was among Machine-age Americans, noting both that the painter Joseph Stella reported having often stood on the Brooklyn Bridge at night feeling "deeply moved, as if on the threshold of a new religion or in the presence of a new DIVINITY" (85), and that a college student witnessing an April 1981 launch of the space shuttle *Columbia* told a reporter, "I've been looking forward to this all my life, but I never thought it would be so powerful, so awesome" (239). Although Nye points out that "the sublime encounter leaves observers too deeply moved to reflect on the historicity of their experience," he also shows that over the years, "the same objects cannot always be counted upon to evoke the sublime response. . . . Ultimately, the constant is not the technological object *per se*, it is the continual redeployment of the sublime itself, as a preferred American trope." Put another way, he writes, "I want to stress the historicity and the politics of sublime experiences, presenting them as emotional configurations that both emerge from and help to validate new social and technological conditions" (xvii).

In this light, Nye asserts that by proposing a new way of experiencing landscape as a "geometrical sublime" requiring "an apparently infinite series of mental transpositions of scale and orientation, forcing the viewer to perform olympian calculations" (106), the Brooklyn Bridge actively promoted the construction of skyscrapers in Manhattan:

> It is a transitional object not only because it is part of a transportation network but also because it gives the eye new vantage points. The almost endless multiplication of views and perspectives it offers up to contemplation continually insist on the primacy not of nature but of a man-made landscape of steel and stone. (87)

In other words, a cycle exists in which cultural forces beget built spaces, which in their appearance and function seem to exceed all known ways of describing them, thus calling for new modes of expression to be brought into existence.

This sublime response, however, applies mainly to seeing built spaces as objects in the moment: time is suspended as the mind seeks helplessly for a language to describe the wonder of the scene which meets the eye from a removed vantage point. Yet as attested above, there is more to the wonder of seeing a great work of civil engineering than just the apprehension of its enormous dimensions, or even the astonishment that something as big as the George Washington Bridge could also be so elegant, graceful, and even intricate in texture. Rather, as it is something built to be used, this fascination is one of *time*: the awe at how much of a challenge it was to build (Nye does discuss this facet with sensitivity—see especially pages 85-86), the sense of walking exactly where others have gone in the past, the promise of transition, of transformation, the wonder at the unprecedented means of moving across space the structure (or the locomotive or jet airliner) provides. Consider the moment of wonder which occurs as *Gatsby*'s Nick Carraway motors into Manhattan one morning: "The city seen from the Queensboro Bridge is always the city seen for the first time, in its first wild promise of all the mystery and the beauty in the world" (67). The sublime response changes over time, I therefore suggest, because it is inherently about the telling of stories, and as those stories play out they create new categories of wonder.

Gatsby's meteoric rise and fall, in fact, underwrites a component of the sublime experience of technology which Nye to some degree overlooks: one cannot experience such moments of epiphany, of infinite promise, without in time encountering a concomitant sense of loss. Significantly, in this particular novel all the promise held out by American space turns out to be ungraspable. Near the end, while gazing at the Long-Island landscape near the Gatsby's house once more, Carraway becomes "aware of the old island here that flowered once for Dutch sailor's eyes—a fresh, green breast of the new world." Gatsby, he reflects, "had come a long way to this blue lawn, and his dream must have seemed so close that he could hardly fail to grasp it. He did not know that it was already behind him, somewhere back in that vast obscurity beyond the city, where the dark fields of the republic rolled on under the night" (171). American space is always initially open, Fitzgerald suggests, for people to imagine ways of living out their dreams in it, and always eventually closed by the end of one's journey. Likewise, we shall see in this examination of narratives of a bridge's construction instead of its subsequent use, time's inexorable passage threatens not only the achievement of any given bridge's construction but the bridgebuilder's identity as well.

In constructing and reworking these stories, 20th-century writers of fiction and non-fiction alike found themselves confronting increasingly compelling—and unsettling—explorations of the nature of the achievement as *ending*. All, in their own ways, are narratives of the intellectual and corporeal transformed into the mechanical: in each case, a bridge must first exist as an idea, then be built with the vital contributions of the human body, only then to result in a structure which exceeds the scale of the human. This chapter thus begins with a long section on the non-fictional narrative genre of the history of bridges, especially as far as how it was reformulated in the hands of the great 20th-century bridgebuilder David B. Steinman. It does so not only because Steinman is in large part responsible for defining our knowledge of the relationship of bridgebuilder's lives and their creations, but because his telling, in being constructed the way it is, demonstrates some particular anxieties about matters of reputation and character. By examining what's at stake in this story we can better understand the contrast between two early-20th century novels, one a work of popular fiction, one more literary in its scope and intentions, regarding the soul of the builder of great works. Because the builder's creation both results from his[1] personal fall from received knowledge into awareness, yet when built exceeds his immediate control, it threatens his very identity. Writing, all these tales imply, can either just describe the playing-out of this threat, or can attempt to resolve it. Pointedly, however, in Willa Cather's hands, fiction cannot be co-opted to establishing fixities, for truth, she sapiently implies, lies only in change.

Of the main texts under examination here, only one, Cather's *Alexander's Bridge* (1912), has to date received any small measure of critical attention (although the few extant published critical treatments of this novel do include Elizabeth Ammons' excellent 1986 article in the pages of *American Quarterly* and some extended study in Tichi's *Shifting Gears*). The others, Rex Beach's *The Iron Trail* (1913), and the engineer David B. Steinman's *Bridges and their Builders* (1942; second edition published 1957), have, except for a few brief parenthetical mentions, failed to sound on the literary-critical academy's radar altogether. This situation is understandable for a number of reasons. Cather herself, in a famous article entitled "My First Novels (There Were Two)," later distanced herself from *Alexander's Bridge*: she had come to see her first published book as inferior in quality to her other novels (writing it was to her "like riding in a park, with someone not altogether congenial, to whom you had to be talking all the time" [*On Writing* 93][2]); Beach's novel is usually (and perhaps justly) seen as indistinguishable from a myriad of popular adventure/romance novels about the heroic engineer;[3] finally, Steinman's book is a work of non-fiction (one mainly directed at younger readers, at that), and thus easily seen lacking in "literary quality" (an assessment with which, as we shall see, the author himself would have vehemently disagreed).

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[1] I use this sexist language intentionally: no extant histories of bridgebuilding of which the present author is aware point to even a single female bridge designer; as it is, the most famous woman in bridgebuilding history is Emily Roebling, Washington Roebling's wife, who helped him to supervise construction of the Brooklyn Bridge from his sickbed by relaying messages to on-site construction superintendents after his health was ruined in the caissons. Speculatively, this situation perhaps begins to explain why so much of the most perceptive and trenchant fiction about bridgebuilding is the work of female authors: more than others, they recognize the builder's crisis not as a universal one of educated people, but specifically as one of masculinity, leading to more detached, wry, and sophisticated explorations of how builders are, quite literally, un-manned by their creations.

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[2] In a preface to a later edition of *Alexander's Bridge*, Cather writes that "The difference in quality in the two books is an illustration of the fact that it is not always easy for the inexperienced writer to distinguish between his own material and that which he would like to make his own" (Dover ed. vii).

[3] Other prominent examples of this genre include Richard Harding Davis, *Soldiers of Fortune* (1897); Harold Bell Wright, *The Winning of Barbara Worth* (1911); John Fox Jr., *The Trail of the Lonesome Pine* (1908); Francis Lynde, *The Quickening* (1906); and Zane Grey, *The U.P. Trail* (1918). All of these titles were bestsellers at the times of their respective publications (Tichi 124-25).

Ammons and Tichi have already persuasively located *Alexander's Bridge* as a trenchant critique of a then-contemporary widespread cultural project to recognize the engineer as a new kind of masculine heroic frontiersman whose special skills would lead America toward a bright, modern future, and in doing so have found much in the novel of which to approve. However, as suggested above, the novel also responds to a concomitant narrative mode, then under construction, about how bridgebuilders especially embodied the progress of civilization itself.

David Barnard Steinman (1887-1960) was one of the preeminent bridge engineers of the twentieth century. Brilliant, headstrong, possessed of an relentless work ethic (and no small measure of ego), Steinman is important to any discussion of the genre of narratives of bridge construction, for his legacy is to have greatly contributed to how we conceive of the achievement of bridges, that is, both how these structures came to be and how we may *know* and *tell* what they do. Born on the Lower East Side of Manhattan to immigrant parents, Steinman as a young boy sold newspapers on the street in the shadow of the Brooklyn Bridge. He studied at the City College of New York (starting at the precocious age of thirteen) and the Cooper Union Night School; he later earned a PhD in civil engineering from Columbia University and got his professional start by assisting with the design and construction of New York's Hell Gate Bridge and the Sciotoville Bridge between Ohio and Kentucky, both completed in 1917. Over a long and distinguished career, he oversaw the design of more than four hundred bridges, including such widely acclaimed structures as Brazil's Florianopolis Bridge (1926), the Carquinez Strait Bridge (1927) in California, the Mt. Hope Bridge (1929) in Narragansett Bay, Rhode Island, the St. John's Bridge (1931) over the Willamette River at Portland, Oregon, Maine's Waldo-Hancock Bridge (1931), the Henry Hudson Bridge in New York (1936), and, as his last and greatest major work, the Mackinac Straights Crossing (1957) in North Michigan, popularly known as "Mighty Mac." At the time of this last bridge's construction (and many years hence), it was the world's longest-overall suspended structure and had the second-longest clear span. Steinman also engineered the early-1950s strengthening and reconfiguring of the Brooklyn Bridge's traffic decks.[4] He was an outspoken and persuasive activist for the use of the suspension design for long-span bridges (he established that they could be both more cost-effective and more elegant than cantilever, steel-arch, and truss spans in these applications), became the leading authority of his generation on the aerodynamic stability of suspension bridges (a prominent issue in the United States following the dramatic wind-provoked collapse of Washington's Tacoma Narrows Bridge in 1940), and advocated tirelessly for rigorous professional standards and greater public recognition in the field of engineering as a whole.

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[4] As it happens, these renovations have earned particular censure in literary-critical quarters, as they obstruct the panoramic view of Lower Manhattan from the pedestrian walkway. For the critic Thomas S.W. Lewis (1977), "It is not without irony that Steinman, one of the great suspension bridge builders of this century and one who sought to be faithful to and to work in the tradition of his masters, the Roeblings, compromised the absolute grace of the Bridge's arc in order to accommodate the congestion of automobiles, a form of transportation that Washington Roebling despised" (22). (The younger Roebling lived a full fifty years after the completion of the Brooklyn Bridge, dying in 1926, it is said, without once having ridden in an automobile [Trachtenberg, *Brooklyn Bridge* 97]).

Steinman's legend as an engineer even includes a lifelong rival, Othmar H. Amman. The two had both worked early in their careers for the great New York City Commissioner of Bridges, Gustav Lindenthal. Amman, a Swiss citizen, was called away for compulsory military service at the outset of the First World War, and a young Steinman took his place. When Amman returned and found his own position in Lindenthal's organization somewhat diminished, he and Steinman came to a parting of the ways; later, as fully established leaders in their profession, they found themselves in competition over design contracts for a number of prestigious bridges of nationwide repute, including Mighty Mac itself. From the 1920s to the early 1960s, a period in which most of America's largest and most famous bridges were built (Amman's Verrazano Narrows Bridge in New York, completed in 1965—having first been proposed by Steinman in the 1930s—remains to this day the longest-spanning bridge in the Western hemisphere), either

Steinman or Amman designed virtually every large American bridge of note, save for San Francisco's Golden Gate Bridge, the San-Francisco-Oakland Bay Bridge, Detroit's Ambassador Bridge, and one or two others.[5]

Such achievements alone are remarkable, but Steinman had literary ambitions for his work as well. In fact, his biographer William Ratigan, a man in awe of the great engineer's achievements, refers to him repeatedly as the "poet-engineer." Steinman's was a generation of engineers whose university studies included far more liberal arts courses than those studied under the modern-day curriculum[6], and he was proud to excel in every subject; moreover, some of his fondest college memories were of time he spent as a member of a student literary society at CUNY (Ratigan 55). Steinman continued to read literary works enthusiastically throughout his life. Accordingly, during his professional career, he sought to frame his achievements, and those of the profession in general, within what he understood to be a literary context. Along with several books about the history of bridgebuilding (including *The Builders of the Bridge* (1945), an historical biography of the Roeblings), Steinman published a volume of poetry, *I Built a Bridge and Other Poems* (1955), leading a chronicler of the Mackinac Bridge's construction to call him "a noted bridge engineer with the soul of a poet" (Rubin 12). Steinman himself defined a great bridge as "a poem stretched across the stream" ("I Built" 19), and his poetry most often concerns the beauty and might of bridges, especially in terms which exceed the technical and signify as aesthetic and even spiritual:

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[5] As a measure of his public prestige as an engineer, Amman's bust was installed on the George Washington Bridge (1931), which he had originally designed, to commemorate the installation of a second traffic deck on that structure in 1962 (Gies 239).

[6] According to the engineer Samuel C. Florman, himself the holder of a Master's Degree in English and an impassioned advocate for more humanities instruction for engineers, "early engineering educators—Benjamin Franklin Greene at R.P.I., William Barton Rogers at M.I.T., Andrew Dickson White at Cornell—perceived the liberal arts as an integral part of any engineer's education. In 1867, one-third of M.I.T.'s mechanical engineering program consisted of languages and humanities" (172). In the late 1980s, Florman reported that the standard portion of humanities courses in engineering degrees in the U.S. was more commonly 12.5%.

> A bridge of strength and grace in mystic blend
> Embodies spirit treasures that transcend
> The steel and stone; the builder's dream is there,
> Each curve a song, each soaring line a prayer.
> A dream, a song, a prayer—these three combine
> To make the bridge a beacon and a shrine. ("I Built" 13)

Here, not only is a bridge portrayed as a work of art along the lines of Goethe's "frozen music," but in its aesthetic grace as embodying the higher aspirations of its designer. Steinman's basic rule, according to his biographer, was that "Every bridge should be designed with the guiding and impelling desire to achieve beauty" (140).

Steinman's way of telling the story of bridgebuilding was to concentrate on the personalities of the chief designers of great bridges, a method which was unique among those authors who had preceded him. By the middle of the twentieth century, many histories of bridgebuilding had been published. Hubert Gautier's *Traité des ponts*, begun in 1716 and printed in 1728, is thought to be the first published book on the construction of bridges; it and subsequent books dealt primarily with technical concerns, not historical lore. Bridge engineer Henry Grattan Tyrell's *History of Bridge Engineering* (1911) purports to be the first English-language book of its kind: although it also concentrates almost exclusively on technical particulars, it does so to provide student engineers not with immediately pragmatic up-to-date knowledge but with a sense of what now-obsolete technologies had contributed to the discipline's acumen. It also detailed then-contemporary structures in its narrative sweep, thereby placing them within an historical context. Tyrell's book was soon followed by Brangwyn and Sparrow's *A Book of Bridges* (1915), which was aimed more at the lay bridge enthusiast (or "pontist," as they termed said person) than to the young professional civil engineer.[7] Other books on bridgebuilding followed throughout the early years of the twentieth century, each including a greater share of myth and legend alongside technical facts. Archibald Black's *The Story of Bridges* (1936), for instance, details not only structural technicalities but some of the lore of bridge construction, such as innovations in construction techniques, contractual and political difficulties, setbacks due to weather, challenges imposed by unique topographical features of specific construction sites, workers' legends (such as the superstition that work must halt for the day if a bird lands on top of an incomplete structure), and so on. Black's preface, tellingly, mentions that the author "is particularly indebted" to a few prominent engineers who had provided technical information and commented upon the manuscript, Steinman himself being foremost among them (v-vi). However, the physical structures still remain front-and-centre in Black's telling, while the biographies and personalities of their chief engineers, while given more prominence, are not crucial factors in assessing each bridge.

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[7] This particular book had finally come together, after many years of research, right at the outbreak of the First World War; not surprisingly, it assesses the history of bridgebuilding mainly in military, and markedly pragmatic, terms. A prefatory note states that "A pontist, then, when studying the strife that roads and bridges have distributed, must clear from his mind the fanciful ideas that pacifism has invented; he is an adventurer in history, not an idler in a world of visions. To-day, above all, he is called upon to see the truth, because Europe, driven by the motive-powers of hostile ideals, has passed from industrial strikes and contests into other phases of necessary warfare. Once more differing civilizations will have their worth tested to the full on stricken fields; and once more roads and bridges will dominate the military tactics and strategy" (vii).

Despite Ammons' and Tichi's well-documented illustrations of the engineer's heroic status during the early twentieth century, it is quite striking how often that in popular magazine articles and books of this period describe feats of engineering as heroic, while in these tellings the engineers who design them seem not to take on distinct personalities but remain generic heroic types. "Before the sculptor can embody his spiritual or ideal conception into marble," wrote John Roebling in an 1864 essay, "he must have spiritually created the statue in his own mind" (qtd. in Trachtenberg, 68).

Yet in the culture of the era, the singular importance of this powerful mind did not necessarily elevate its possessor from sheer type to individual personality. In Frank W. Skinner's 1902 *Century Magazine* article "Triumphs of American Bridge-Engineering," for instance, many great structures are mentioned, but not one engineer is referred to by name—their "characteristically American" (233) designs belonged not to any individual but to the adventurous spirit of the age. Similarly, Archibald Henderson's "In Praise of Bridges" (*Harper's*, 1910), even while maintaining that "The great inventor, the great scientist, the great captain of industry, is the great poet of the century, achieving masterpieces of material accomplishment as Shakespeare achieved a perfect sonnet, Michael Angelo an eternal sculpture, Milton an immortal epic" (933), does not find it fitting to mention a single engineer by name.

However, in *Bridges and their Builders*, co-written with Sara Ruth Watson, and *Famous Bridges of the World* (a simplified version of the first book aimed at younger readers, first published in 1953), Steinman synthesized these narratives into one which turned the focus of attention towards the idiosyncratic characters of those who had designed the structures and which concentrated at all times on notions of beauty. The point had, in fact, been put forth previously: in *The Brown Decades* (1931), Lewis Mumford had argued that the Roeblings' chief achievement with the Brooklyn Bridge was not to prove the pragmatic value of new construction materials, but to "give people confidence in that side of engineering which the engineer had least concerned himself with: its human and aesthetic effect" ("Brooklyn Bridge" 44). Steinman, however, applied similar insight to the entire history of bridges. *Bridges and their Builders* takes as its epigraph a quotation from Franklin D. Roosevelt: "There can be little doubt that in many ways the story of bridgebuilding is the story of civilization. By it we can readily measure an important part of a people's progress." The concept that the story of bridgebuilding could be that of Western civilization in general was not new. Henderson had argued that "From the dawn of creation the bridge *was*—coeval with man, contemporaneous with the individual, as with the life of the race, reflecting in all its minute and countless changes all the minute and countless changes of human civilization" (926-27); for Tyrrell, "The art of bridge building and the profession of civil engineering . . . are therefore as old as the races, and have been coexistent with the building of cities and the progress of civilization in all ages" (15); Black had written that "Bridges came only with civilization and as we trace their development we find ourselves tracing the history of civilization" (30). Steinman, however, suggested a new definition for *civilization* itself, as the realization of the idiosyncratic individual.

By thinking through bridgebuilding in such terms, Steinman introduces new criteria for what always was, essentially, an exercise in canon-formation. Steinman begins *Bridges and their Builders* by expressing a desire "to make you see bridges as we see them," the "we," one surmises, being civil engineers. Yet this vision immediately exceeds the technical, for "A bridge is more than a sum of stresses and strains: it is an expression of man's creative urge—a challenge and an opportunity to create the beautiful. A bridge is the fulfilment of human dreams and hopes and aspirations" (xv). Because in this view a bridge's physical presence is now less important in and of itself than as a sign for the human effort behind its creation, Steinman proposes "to give you a glimpse into the drama, the romance, the poetry of bridgebuilding. We want to tell you of men's dreams, of their faith, of their struggles, of their tragedies, and of their glorious victories" (xv).[8]

In so setting out, with the benefit of his literary acumen, to tell the story of bridges as "an epic of human vision and courage, high hopes and disappointments, heroic efforts and inspiring achievements," Steinman's telling does follow what was at one point the standard history of Western

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[8] Following Steinman's lead, virtually every subsequent non-fiction book about bridges published for a non-technical readership has, while detailing technical advances in bridgebuilding, focussed both on the personalities of great bridges' chief engineers and on the aesthetic and symbolic function of these structures. A partial list of these titles includes Joseph Gies, *Bridges and Men* (New York: Doubleday, 1963); David Plowden, *Bridges: Spans of North America* (1974); Scott Corbett, *Bridges* (1978); Steven A. Ostrow, *Bridges* (1997); David Bennett, *The Creation of Bridges* (1999); and David Macauley, *Building Big* (2000). Interestingly, Alan Trachtenberg's *Brooklyn Bridge: Fact and Symbol* (1965), the first work on bridgebuilding and artistic representation by a literary critic, credits both Steinman's *Bridges and their Builders* and *The Builders of the Bridge* as sources.

Civilization. It is an history not only of the conquest of nature, but of a developmental and geographical arc of knowledge from accident, to intention, codification and militarization in Roman times, loss in the Dark Ages, revival under medieval religious leaders and craft guilds, co-option by the fickle hands of the aristocracy and toll authorities, Enlightenment, opening to unimpeded public access, re-codification in print form and public education, the development of new materials and construction methods, co-option by the greedy hands of 19th-century industrial capitalists, the achievement of true disciplinary autonomy, and, finally, of course, triumph in the mid 20th century. The established canon of great bridges, bridgebuilders, and events in bridge history resulting from this organizational arc, somewhat unlike the twentieth century academic canon of great writers in English literature, emphasizes newness and sheer size instead of refinement and taste. Its contents are, in Steinman's and almost every account, briefly as follows. In the beginning, man does not conceive of bridges himself, but discovers the bridging principle when he finds a tree fallen across a creek (3-4).[9] Soon, he develops tools to chop down trees himself (7), and also builds bridges out of rough stones. Meanwhile, in tropical climes, man learns to weave together vines, and either swings across gorges, or suspends them from each end to make the first suspension bridges (6-9). Builders in the far east develop their own style of permanent bridges where the walkways actually follow the rise and fall of the arches instead of being built flat and level. These builders, the story goes, being of an unchanging culture (especially in China), insist on maintaining these styles to the current day (34).

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[9] In some accounts derivative of Steinman's, such as Corbett's, people do not even imagine the possibility of crossing such a passage until being shown how by example, "perhaps after watching monkeys run across it" (2).

The scene shifts to ancient Rome, which produces "the first true engineers of our civilization" (35). The Romans build bridges mainly for conquering and overseeing territory, but they also develop the scientific principle of performing experiments on materials and methods in order to deduce the best possible means of building bridges. Many of their stone-arched structures survive in use to the present day. Then, catastrophe: "darkness fell upon mankind. To avoid the onrush of barbarians, the few cultured creatures of the classical world fled into the hills—to remote monasteries" (53). Centuries later in France arises St. Bénezèt, who, by legend, as a boy shepherd interrupted a Bishop's sermon with news that God had appeared to him and ordered him to build a bridge over the Rhône. As Steinman tells it, "the Bishop declared that he would believe the story if the shepherd could move a certain huge stone in the neighborhood to the spot on the river bank where God wished the bridge to be built." The boy consents, and, kneeling for a moment beside the stone in prayer, easily lifts and carries the stone. The Bishop declares that a miracle has occurred, and the townsfolk subsequently raise money to build the structure (57). St. Bénezèt is buried on a chapel on his bridge, and becomes the Patron Saint of Bridgebuilders. More importantly, bridgebuilding has become the site at which the will of God is transformed into Science and Technology, and a new period of bridgebuilding is inaugurated led by the Pontist Friars, a group of knowledgeable churchmen. In the meantime, prominent bridges in London and Venice are becoming fashionable dwelling and shopping places; clearing off the increasingly constrictive buildings and making the space public (and thus uninhabitable) will be the work of the Age of Enlightenment.

In the eighteenth and nineteenth centuries, professional standards for engineers come to be set neither by guilds nor by military officers, but by civilians; Gautier's book is published in 1728, and secular trade schools are founded. Builders such as France's Jean Rodolphe Perronet ("Father of Modern Bridgebuilding"), England's John Rennie, Scotland's Thomas Telford, England's Isambard Brunel, and America's James B. Eads discard received traditions to experiment with new forms and materials. Cast iron, wrought iron, steel, and steel cable all come into use in bridgebuilding for the first time. Then, in the midst of explosive commercial expansion carried out on the cheap, an age of disasters: Ohio's Ashtabula Bridge fails on a snowy night in 1877, killing ninety train passengers; Scotland's Tay Bridge blows down in 1879, killing about a hundred; the Québec Bridge falls during construction in 1907, killing seventy-six workmen and directly inspiring

Cather's novel; somewhat later, in 1940, the Tacoma Narrows suspension span in Washington State tears itself apart in a windstorm, fortunately killing only a reporter's dog, trapped in a car on the collapsing span. Each of these last three disasters forever ruins the reputations of the respective chief engineers involved. In each case, the fault is with engineers who had relied on received knowledge divined from the earlier construction of much smaller-scale structures, and a need is therefore established to *tailor scientific research to the specific task at hand*. For a time after each of these disasters, engineers cautiously overbuild their structures (especially Benjamin Baker and John Fowler's Massive Firth of Forth Bridge, completed in 1889), but with time, scientific research carries the day, and spare structural elegance returns.

By the middle of the 20th century, writes Steinman, "We have now come to realize that bridges are an index of progress and civilization, and that any large bridge should be designed with every thought and effort to achieve beauty. That much is due to a civilized age" (388-89). As he points out, the American Institute of Steel Construction begins giving out a prestigious Artistic Bridge Award in 1928 (390). Bridges, Steinman realizes, are not just transformative in the sense that their physical construction alters a landscape, but in that they have the capacity to alter the fabric of society. "The highest artistic qualities of design are particularly important in a monumental bridge erected in a great metropolis," he maintains, because

"The recognition of these requirements is bringing about a new era of beauty in bridges" (389).[10] In turn, the bridge engineer becomes "a leader of mankind," helping to plan "the social mechanism in order to assure men against the blights of idleness and poverty" (391).[11] Yet for all of this, Steinman is mainly interested in bridgebuilding as the construction of beautiful objects, not staged aesthetic or social processes. He advises his younger readers that "To appreciate a bridge one needs not only to walk over it but stand off at a distance and look at it broadside; then to go down under it and study its construction" (*Famous Bridges* 93).

I need hardly rehearse the argument that such a history of civilization does not address Western history as formed, as we might today argue, through such things as cross-cultural conflict and conquest, relations of production, contributions of women (or, for that matter, acknowledgement of their existence), negotiation of homosocial bonds between men, or epistemological transition in general. Instead, civilization's history for Steinman is a gradual movement from ignorance into objective knowledge, advanced along the way by visionary individuals. To write fiction, I argued earlier, is to think in terms of how techniques of temporal foreclosure rearrange the flux of life into discrete statements with intellectual, emotional, moral, and political effects; for Steinman, however, to address space in literary terms is to address the development of such intangible concepts as beauty and consciousness as profoundly vital and inherently transformative categories.

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[10] Steinman's thoughts here predate some recent discussion in the field of engineering about "structural art"—see Chapter I.

[11] In *Famous Bridges of the World*, Steinman provides an alternate peroration: "the engineer realizes that he is building more than a bridge; he is fostering understanding and good will between peoples. These structures must be strong and enduring and beautiful" (96).

In this telling, the building of each great bridge is a moment in man's centuries-long transition from blind adherence to the full consciousness of Knowledge. The story of any great bridge's construction is a making-visible—in printed text as in concrete and steel—of its builder's idiosyncratic genius. Most significantly, perhaps, the builder's story of achievement *ends* here with the bridge's opening to traffic, for any further histories which might accrete to the structure are only those that undermine its soundness. After all, suggests Steinman, this engineer has built a structure whose appearance may be elegant and striking, but whose ultimate service is to provide smooth functioning to the public. This combination of goals inescapably results in a destabilizing paradox: the achievement which makes a builder memorable is also that whose steadiness and reliability allow users to forget. Bridges themselves cannot present the memory of their builders to generations of users to come: thus, printed stories must be composed to preserve these memories. As we shall see, writers like Rex Beach and Willa Cather took up precisely this paradox in their work, to very different ends.

Having examined the cultural implications of the 20th-century American history of bridgebuilding in the moment of its fullest realization in Steinman's *Bridges and their Builders*, we are able to discern heretofore unnoticed or under-emphasized cultural and intellectual engagements in Beach's *The Iron Trail* and Cather's *Alexander's Bridge*, both of which were written at an earlier stage in the aforementioned grand narrative of bridgebuilding. Each of these novels, as it is, considers the problem of the potential decay of the bridgebuilder's achievement and very identity, even as his structure is under construction.

The main character of Rex Beach's *The Iron Trail: An Alaskan Romance* is Murray O'Neil, a famous engineer. The plot involves O'Neil's building a railroad in Alaska to create supply lines for coal extraction (as he puts it himself, "Railroads are the keys by which this realm can be unlocked; coal is the strength by which those keys can be turned" [227]). O'Neil, echoing the popular conception of engineers of his day, is both a graceful aristocrat and a rugged man of action. In some ways, he is mechanical and pragmatic in his mental habits, having "a mind which worked like an alarm-clock" (78). Yet more profoundly, O'Neil is a dreamer. At the outset, he is described as "almost poetic in his own quiet way, interweaving practical thoughts with fanciful visions, and he loved his dreams" (3).

In fact, O'Neil's imaginative skills, more than all other factors, help him to lead America into a new age of progress and development:

> The world owes all great achievements to dreamers, for men who lack vivid imaginations are incapable of conceiving big enterprises. No matter how practical the thing accomplished, it requires this faculty, no less than a poem or a picture. Every bridge, every skyscraper, every mechanical invention, every great work which man has wrought in steel and stone and concrete, was once a dream. (74)

As a whole, the novel is a narrative of the transformation such a dream undergoes as it moves from the single human head, through the work of the hands of many, and finally to its users as a realized passage of steel. O'Neil's grand scheme is carried out in part by his two chief lieutenants, Parker and Mellen, "for no single man could have triumphed" (325). These men have similar powers to contain and mould gigantic projects with their minds and bodies: "Parker was cautious, brilliant, far-sighted; he reduced the battle to paper, he blue-printed it; with sliding-rule he analyzed it into inches and pounds and stresses and strains: Mellen was like a grim Hannibal, tireless, cunning, cold, and he wove steel in his fingers as a woman weaves her thread" (325). In detailing these men's achievements, *The Iron Trail* is a tale of dramatic spatial transformation and all of its attendant possibilities, as evidenced by a recurring motif of sudden local development. At one point, Beach writes, "Cortez awoke one morning to find herself selected as the terminus of a new line" (44); later on, we find that "Omar itself was a mushroom city, sprung up by magic, as if dampness at its roots had caused it to rise overnight" (102). O'Neil takes it all in stride, for "He was accustomed to the rapid metamorphoses of a growing land; it was his business, in fact, to win the wilderness over to order, and therefore he was not astonished at the changes wrought here during his absence" (46).

Along the way, a number of antagonists threaten O'Neil's project. For one, his immediate competitor Curtis Gordon strives to check his efforts by beating O'Neil's railway to the Alaskan interior with one of his own; their battle culminates in a dramatic rail crossing fight between each man's crew (215-20). For another, there is the villainous but unseen overhanging presence of the federal government; Beach takes pains throughout his book roundly to castigate the dread spectre of industrial regulation, especially regarding the matter of ecological conservation. The novel is, after all, about men who are "willing to lay down their lives, if necessary, to pave the way for the march of commerce" (203): how could one justify getting in the way of "independent Americans who believed themselves entitled to every reward which fortune laid in their paths" (341)? The government thus comes in for frequent censure, as when O'Neil remarks that "This country needs two things to make it prosper—transportation and fuel. We are doing our best to supply the first in spite of hindrance from Washington; but the fuel has been locked away from us as if behind stone walls" (226). Unless he completes a portion of his railway by a certain date, the government, acting under the influence of what O'Neil calls "A conspiracy of the Eastern coal-operators and the transcontinental freight lines" (228), will revoke the coal-field claims in which he has invested most of his personal fortune (37-38).

Still another complicating factor is O'Neil's increasing difficulty in attracting investors to his line. As the plot unfolds, he gradually takes on more and more risk himself, for his investors will only back him if he can complete a portion of the road by a certain date (320). The effect of these financial troubles is further to intensify how much the entire enterprise depends on O'Neil alone: as one character tells another regarding this matter, "In every big enterprise there comes a critical time, when everything depends upon one man; strong as the structure seems, he's really supporting it" (135). When he gets an important financial option signed, he realizes "with fresh force . . . the weight of responsibility that rested upon his shoulders." Under the weight of this duty, O'Neil bravely begins "the most dramatic struggle of his career, a fight against untried conditions, a desperate race against the seasons, with ruin as the penalty of defeat" (321).

The novel's other, and conceivably most significant, blocking force is that of O'Neil's relationships with women—especially the kind of women who write books. He befriends Gordon's step-daughter Natalie and later takes her in when Gordon angrily orders her from his house. In the meantime, he must deal with Eliza, a hard-nosed, down-to-earth reporter who is researching an investigative magazine article about Alaskan railroading. Beneath her flinty public demeanour, we discover, Eliza harbours a soft, feminine interior, yet in order to maintain her professionalism and independence she does not show it or, for that matter, allow anyone to know of her supposedly more dainty middle name of Violet. Both of these women are, in the end, sympathetic characters, but each in her way threatens O'Neil's confidence in his work and must therefore be co-opted. Like any good reporter, Eliza initially wants to dig up good dirt for her article, and O'Neil is at first wary of her presence until he learns that she is fair and honest in her reporting (as well as genuinely fascinated by the work underway) and comes to trust her. Natalie, on the other hand, is too young and flighty to take an interest in railroads and bridgebuilding: on a construction site tour, she cannot "seem to grasp the significance of the enterprise. She saw nothing beyond the even gravel road-bed, the uninteresting trestles and bridges and cuts and fills, the like of which she had seen many times before, and her comment was childlike" (188).

Natalie's behaviour is not merely laughable, for it raises the very real possibility that O'Neil's work will go under-appreciated by the masses and that he himself will be forgotten. Beach recalls that although "The building of the Salmon River bridge will not soon be forgotten by engineers and men of science," people at large know but "little about how the work was actually done" (355). Books, however—including the novel itself—can for Beach be an excellent means of making legible the history of a structure, the stages of its being not visible to the naked eye in space; accordingly, proceeding as if the bridge were real, Beach writes, "since the building of the bridge was the pivotal point in Murray O'Neil's career, it may be well to describe in some detail its various phases—the steps which led up to that day when the Salmon burst her bonds and put the result of all his planning and labor to the final test" (355).

So it is that Eliza, in writing her own narrative about the bridge's construction, herself attenuates the threat that the physical bridge, once completed, will annihilate the character of the builder from whose mind it sprang. As such, although there is some mild romantic attraction between O'Neil and Natalie early on, he comes to fall in love with Eliza instead. Near the end, the bridge is completed just as the ice surrounding it is about the break up for the spring, causing heavy flows to bash incessantly against its supports. The structure has emerged as a fully-formed object and must now resist transforming any more, even while its physical surroundings undergo dramatic upheavals. Running out to the site, Eliza sees that "The bridge stood as she had seen it on the yesterday . . . but beneath it and as far as her eyes could follow the river she saw, not the solid spread of white to which she had become accustomed, but a moving expanse of floes" (381). O'Neil has dismissed everyone from the imperilled structure, but has stayed out on the middle of the span himself in order to live or die with his bridge. Eliza, breaking free of the assembled workmen, runs out to join him, and the two declare their heretofore repressed love for one another as ice jams break against the concrete piers. The novel ends with the following exchange, well worth quoting at length:

> 'It has been a miraculous morning for me,' said Murray, after a time, 'and the greatest miracle is—you, dear.'
>
> 'This is just the way the story ended in my book,' Eliza told him happily—'our book.'
>
> He pressed her closer. 'Yes! Our book—our bridge—our everything, Eliza.'
>
> She hid her blushing face against his shoulder, then with thumb and finger drew his ear down to her lips. Summoning her courage, she whispered:
>
> 'Murray, dear, won't you call me—Violet?' (391)

In one action, then, structure, body, and book have become one, even as Eliza's essential femininity, and concomitant ability to function properly in the domestic sphere, in subjugation to O'Neil's freshly-reconfirmed masculinity, is reasserted. Narrative fiction here has made it possible to track the development of a bridge from the idea of a single man to a structure open for all to use (including those to come who would most likely have no idea whatsoever who he was), and yet to allow his mark on it to remain safely indelible.

Alexander's Bridge is similar in topic to *The Iron Trail*, but has a very different ending. Its main character, a middle-aged engineer named Bartley Alexander, is responsible for the epic failure of a great cantilever bridge in Québec[12]. The accident comes about in part because Bartley, like Murray

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[12] Cather's novel is loosely based on the 1907 disaster mentioned above. Also, as Ammons adduces, the plot has a clear antecedent in Viola Roseboro's story "The Mistaken Man," which had appeared in *McClure's*

O'Neil, does not have autonomy from financial pressures, but is "cramped in every way by a niggardly commission, and was using lighter structural material than he thought proper" (26-27). Yet Bartley is also hindered by ethical weakness; he has an extra-marital affair, and as his life unspools, we are to understand that the bridge's collapse and his personal failure are one. While, as in Beach's novel, Alexander's bridge is a direct extension of his mind and body, Cather's vision embraces another, more sophisticated, conceptual element: the bridge, as a practised space, is a *choice*. Moreover, it is a choice which must be made if one is to leave the symbolic realm of containment and enter into the defined progression of narrative.

Near the novel's outset, Cather describes Bartley as a prominent public figure, whose picture "the Sunday Supplement men wanted, because he looked as a tamer of rivers ought to look." His very body exhibits decisive force, for "his head seemed as hard and powerful as a catapult, and his

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Magazine in April 1907 while Cather was working as an editor at that publication. Roseboro's story also concerns an engineer who dies after a bridge he has designed collapses. Roseboro's story, however, is mainly a long philosophical discussion among three men about the possibility of finding a moral in such a chaotic occurrence after the fact; at its conclusion, one simply opines that "'Doubtless there is a real moral to be drawn from this yarn, but I'm avoiding the conventional. All I say is that staking too much on the stability of your own wickedness may be taking long odds in a mighty wild game'" (635). As it is, "The Mistaken Man" does not really address the complexities and ambiguities of builders' profound relationships to bridges, much beyond asserting that in a fairly direct, unsophisticated fashion, a bridge's collapse is its designer's undoing. Still, by making this suggestion Roseboro's tale broaches an area of inquiry for Cather to explore in her own telling of this relationship.

shoulders looked strong enough in themselves to support a span of any one of his ten great bridges that cut the air above as many rivers" (8). Bartley is less mortal man than potent mechanical engine; even when he stops work for dinner, he "had merely closed the door of the engine-room and come up for an airing. The machinery itself was still pounding on" (11). As a former professor of Bartley's describes it, this force is what "'builds the bridges into the future, over which the feet of every one of us will go'" (13). Yet what the professor approvingly sees as Bartley's ability to triumph over the inexorable passage of time by living only in the moment ("There he is. Away with perspective! No past, no future for Bartley, just the fiery moment. The only moment that ever was or will be in the world!" [8]) turns out, for Bartley himself, to be a terribly numbing stasis. Due to "the obligations imposed by his wife's fortune," he must sit on an endless agglomeration of boards and committees, to the end that "His existence was becoming a network of great and little details. He had expected that success would bring him freedom and power; but it had brought only power that was in itself another kind of restraint" (27).

When Bartley renews his romantic acquaintance with his old flame Hilda Burgoyne, time itself is again held at bay, first positively, but then even more restrictively as before. During a visit to Hilda's apartment, "They stood close together, looking out into the wan, watery sky, breathing always more quickly and lightly, and it seemed as if all the clocks in the world had stopped" (41). Bartley is soon trapped in a state of indecision over which woman he should choose for good. For the bridgebuilder, bridges are structures which engage time and make it run in a certain direction; from the point where Bartley becomes indecisive, he can only experience bridges as portals backwards in time to things he would prefer not to remember. Earlier, as he and his future wife Winifred sit together on a bridge, he tells her "that things had happened while he was studying abroad that he was sorry for,—one thing in particular,—and he asked her whether she thought she ought to know about them." At that point, she tells him, "'No, I think not. . . . You see, one can't be jealous about things in general; but about particular, definite personal things'" (22), and the matter is luckily resolved—for the moment. Yet as the narrative proceeds, bridges increasingly become registers of how Bartley has changed and degraded. Somewhat later, while walking in London with Hilda, he remembers another night when "'the sky, over the bridges, was just the color of the lilacs. We walked down by the river, didn't we?'" (38). Near the plot climax, as he proceeds north to the doomed construction site on a train,

> the hollow sound under his feet told Bartley that he was on his first bridge again. The bridge seemed longer than it had ever seemed before, and he was glad when he felt the beat of the wheels on the solid roadbed again. He did not like coming and going across that bridge, or remembering the man who built it. And was he, indeed, the same man who used to walk that bridge at night, promising such things to himself and to the stars? (78)

Clearly, the answer is no, for Bartley then could make decisions, and now only yearns for the perspicacity to be able to do so.

Merrill Maguire Skaggs notes that the novel's title on its original release in England was *Alexander's Bridges*. The U.S. title, *Alexander's Bridge*, is the one which survives today; for Skaggs, this version "leaves the emphasis on Alexander and his fragmented enterprise" (372). Arguably, however, the plural title would place the most emphasis on Alexander's fragmentation, for the bridges which he attempts to build as unifying structures become multiple over time. Consider, for instance, how the novel's second half contains several scenes in which Bartley gazes across bodies of water where no physical means of crossing exists, seeking direction in his life. At home in Boston, "Going over to the window, he looked out at the lights across the river. How could this happen here, in his own house, among the things he loved? What was it that reached out of the darkness and thrilled him? As he stood there he had a feeling that he would never escape" (47-48). A few pages later, on a trans-Atlantic crossing, he finds that "The great open spaces made him passive and the restlessness of the water quieted him. He intended during the voyage to decide upon a course of action, but he held all this away from him for the present and lay in a blessed gray oblivion" (50). In nebulous state of consciousness, Bartley's new bridge can only be a threat, for it will thrust him into a future just as existing bridges thrust him into the past; he cannot face what will happen then, for he cannot bear to live as a person progressing through history.

Eventually, he writes to Hilda, "I am in my own house, in my own study, in the midst of all these quiet streets where my friends live. They are all safe and at peace with themselves. But I am never at peace. I feel always on the edge of danger and change" (68). His indecision has effectively removed him from being able to participate in a community defined by its cosy relationship to a spatial landscape. As Wasserman (1999) argues, the book, while perhaps melodramatic in many ways, at least rings true in this depiction of an element of the human condition: its readers find "an image of the agony of indecision, of a mind in torment from not being able to find a resolution. It is, in fact, an image of a mind ever more stricken with fear of finally choosing one path and thus eliminating forever what the path not taken promises" (296). (It is not surprising for Wasserman, then, that Cather's editor at Houghton Mifflin, Ferris Greenslet, recommended *Alexander's Bridge* for publication, because "he found a 'spiritual sense of life' in the manuscript" [294]). Bartley cannot choose a path through space upon which to proceed, and in the end, a built structure which would function as a defined path forward and backward through open space itself collapses due to his failings.

When the new bridge finally falls at the novel's end, Bartley is on it. He carries in his pocket a letter to Winifred, which he has not been able to send: "If he told her now, he knew, it would be irretrievable. There would be no going back. He would lose the thing he valued most in this world; he would be destroying himself and his own happiness" (75). Later on, while tending to his drowned corpse, which has been pulled out of the river, she finds this note, "water-soaked and illegible" (87). His one definite decision is thus literally washed away (Winifred does perceive that "because of [the message's] length, she knew it had been meant for her" [87]). Bartley's choice has never been made; concomitantly, both his bridge and his personal writings have been erased. Neither of these highly personal compositions, that is, will be able to tell his story to future users/readers. The novel ends with Hilda and the professor talking about Bartley in front of a roaring fire, just as he had with Winifred at the very beginning. In a sense, nothing has actually happened: in dying, Bartley, never experiences the satisfaction of escaping from his obligations.

In conclusion, for many 20th-century American writers, describing the achievement of any major bridge's construction meant to make readable one of the structure's more obliquely inscribed aspects, its builder's metamorphosis from blind adherent to enlightened individual in possession of uniquely derived knowledge. Since this transformation is measured by the register of the chief engineer's consciousness and identity, these narratives are repeatedly structured around the observation that a great bridge, before it exists in steel and concrete, exists first as a fully-formed entity in this engineer's mind. Ideally, his bridge then speaks his story to subsequent users forever—with the necessary help of fictional representations which render this story coherent and permanent. A more sophisticated writer like Willa Cather, we saw, is less trusting in the ultimate redemptive power of such single transformative moments of achievement. For her, people moving through space and life alike are constantly transforming, resisting, or being unable to face transformations, and revisiting the sites of earlier transformations and measuring their current states against such past moments of vision and accomplishment. In such a writer's hands, a bridge, in the process of emerging from its creator's mind, threatens to annihilate its creator's identity in history, even as it creates the passage which becomes the stuff of other histories.

Unlike Steinman and, for the most part, Beach, Cather bravely opens up the potentially destabilizing exploration of how a builder is linked to his bridges not only at the moment of their completion, but onwards in time as well. Bridges are not only built but crossed; crossing, being not only repeatable as an experience but one which is *about time itself*, leads into narratives of transformative signification. This dissertation's next chapter deals with the stories emerging from the fact that bridges are crossed not only by their builders but by communities of users.

III: Bridges, Community Standards of Spatial Practice, and the Redemption of Affront in Kipling, Laurence, Kadare, Wilder, and Ondaatje

This chapter concerns narratives of the next phase of a bridge's existence after its initial construction: its adoption into the lives of its users. In Rudyard Kipling's "The Bridge-Builders" (1894), Margaret Laurence's "The Tomorrow-Tamer" (1963), and Ismael Kadare's *The Three-Arched Bridge* (1978), it becomes apparent that these community standards are often ways of accommodating ruptures caused by the intrusion of modernist technology of the metropole into remote, self-contained hinterlands. In all of these texts bridges are addressed as intrusions into, and challenges to, the ethical fabric of community life. There is a political dimension to the language they speak: they bring to light divisions between "us" and "them," and ask the locals how they will receive and conform to the edicts of distant imperial regimes. The architect Stephanie White (2002) usefully describes such arrivals as follows: "One might say that modernism consists precisely of the dialectic between the local and the universal, both necessary to the other" (252). Homi K. Bhabha (1994), whose thoughts White credits for influencing her own, makes a similar argument while searching for "a *framework* for cultural otherness *within* the general dialectic of doubling that post-modernism proposes." In Bhabha's formulation, "it is this 'taking place' of modernity, this insistent and incipient *spatial* metaphor in which the social relations of modernity are conceived, that introduces a temporality of the 'synchronous' in the structure of the 'splitting' of modernity" (240). Modernity, in articulating itself as a physical presence in space, I take it, inaugurates a paradoxical time for itself: time is now imagined to flow simultaneously everywhere, these standardized structures seem to imply, but because this hypothetical concurrence is inherently a language of transformation, it harkens constantly back to former states of existence. Here, in this chapter's comparative study of fiction about bridges and community standards, however, we see that modernity's splitting is resolved specifically by bodily sacrifice in both colonial and democratic contexts, albeit perhaps with different ethical connotations in each.

Even if bridges in particular locations are products of local craftsmanship, not modernizing technologies exported from the metropole, the standards by which they are crossed often challenge individuals to reconsider their membership in the larger community. In a passage adapted for schoolchildren from Melicent Humason Lee's children's novel *Marcos* (1937),[1] for instance, the title character, a young boy in Mexico, sets out from his little village to find work in the "great city " in order to find work and secure the wherewithal to purchase a pair of oxen for his father. Along the path, he is daunted by an enormous rope bridge, which he is terrified to cross. He recalls that an elderly woman of his town had encountered the same difficulty and was helped by people who blindfolded her and talked her across the span so she would not be terrified of the great height. Marcos, however, is alone. Just as he is about to turn back, a wise old man appears, who tells him, "'Cross the bridge, my little friend. Many bridges will you find to cross, and you can never go anywhere unless you cross a bridge. Cross the bridge! There will be bridges of work well done. There will be bridges of kind deeds. There will be bridges of doing the right thing. Cross the bridge!'" (16). Marcos accedes and sets out on the swaying span, but along the way is imperiled by an almost irresistible temptation to look down. Here, he defiantly exclaims, "This is the bridge of my people and I am at home on

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[1] Here, I cite a version of Lee's story adapted for the Canadian elementary school reader *Over the Bridge* (1946). For a somewhat different adaptation of the same passage of this novel with the old man omitted, see the American school reader *The Road to Safety: Who Travels There* (1938). It is striking how these 1930s and 1940s educational texts stress both a practical understanding of built spaces and an appreciation of their symbolic

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and moral value. *Who Travels There*, for its part, contains a series of chapters on the historical development of bridges (and their builders' gradual adoption of the scientific method, instead of the less organized process of trial and error), interspersed with fictional tales such as Lee's.

These structures, mid-20th century students were taught, could even help young people to develop a love of reading and books. To that end, *Over the Bridge* has on its title page a watercolour image of children happily crossing a bridge formed by an upside-down open book spanning a stream. A section therein entitled "The Bridge to Bookland" contains a series of tales (most notably Mary F. Sanderlin's "Visitors from Bookland") in which fictional characters come alive and promise to fascinate children who are willing to read further into their exploits. It also contains sections entitled "Bridges in Storyland," "The Bridge to Wonderland," and "The Bridge to Other Lands."

you!" (17). Making it to the other side, he realizes he has "done the hardest thing first. Now things in the great city will not seem so hard" (17).

The overriding moral, one takes it, is that life contains challenges which must be met with bravery—especially if one is a young Mexican being described by an American author. Yet Marcos' success significantly comes on a bridge whose builders, though members of his own people, have departed the scene. In their absence, though, there *are* clearly right and wrong ways to cross: one should only look straight forward and place one's feet one-by-one on the bottom rope carefully by feel, talk to others while crossing (or to oneself if alone), and not freeze in terror in the middle, at the risk of slipping from the ropes. These means are codified by a combination of the structure's innate capacity, in Umberto Eco's terms, to denote the function it is meant to fulfill through its physical form, and, just as significantly, by a wealth of crossing lore Marcos holds in his mind (and which we consequently hold in our hands, in the form of the book itself). Significantly, the young man's crossing, though performed in isolation, is ultimately the realization of a *community standard*. The young boy does not build his own bridge to cross the valley, but enters into an existing dialogue of crossing. Even as he ventures away from his people, he paradoxically becomes closer to the central core of their values.

What is not said in Marcos' tale, but is so often said in others, is that the particular challenge of this spatial practice is to reconcile the affront to

God and nature alike each bridge makes in daring to cross the boundary of a watercourse. In Book X of Milton's *Paradise Lost*, the building of bridges is literally the work of the damned: Sin and Death, down in hell, want to build a bridge between hell and earth to ease Satan's recurrent passage between the two realms. Sin therefore calls upon the minions of the underworld to perform what he calls

> Advent'rous work, yet to thy power and mine
> Not unagreeable, to found a path
> Over this main from hell to that new world
> Where Satan now prevails, a monument
> Of merit high to all th'infernal host,
> Easing their passage hence, for intercourse,
> Or transmigration, as their lot shall lead. (219)

Together, they make "a passage broad, / Smooth, easy, inoffensive down to hell" (221) and, Milton has it, this egregious passage haunts our days still. Lest it be thought that this notion of bridge as transgression in terms of spiritual faith is purely Western, I adduce the example of Japan's Akashi Kaikyo bridge, completed in 1998, whose main span of 1,990 metres (almost a full one-and-a-quarter miles) is the longest in the world. Its engineers are said to have decided not to make it an even 2,000 metres for no particular technical reason, but only because they "didn't want to challenge the gods" (Dupré 115). In nearly all times and places, in fact, people have believed that a newly built bridge is fundamentally an intransigence which must be redeemed as soon as it is completed. The question of how this redemption might be carried out, in the eyes of perceptive writers of fiction, has profound moral and political implications in local communities.

All the texts taken up in this chapter have at times earned lukewarm or outright negative assessments from literary critics, mostly, we shall see, for being episodic instead of having sustained narrative arcs, for having a scattered focus between the registers of the personal and the social, or for being politically opaque at moments where they are expected to be progressively transparent. None of these assessments, though, coherently takes account of the narrative indeterminacy obtaining to built spaces themselves and the ways in which writers of fiction are called upon to make this ambiguity readable. The communities of spatial practice engendered by bridges are indeed disparate, especially in time. That the works examined in this chapter, though belonging to a number of significantly different times and literary traditions, all make visible similar social and spatial dynamics in the effect of modern bridges on community is perhaps a testament to the similarities in how new means of passage affect local social structures everywhere (although the settings are different, for one thing, the technology itself often claims a certain universality). Kipling's, Laurence's, and Kadare's contemplations all make clear that this separation is profoundly involved in the production and maintenance of ethnic and class hierarchies. All invoke the old superstition that a bridge will take a life (or several lives) to keep standing, and in their telling, the life is always that of a local, not a cosmopolitan. This body, being lost to the abstraction of a narrated passage for others, has important implications for spatial narrative itself. In this context, Thornton Wilder's *The Bridge of San Luis Rey* (1927), which likewise depicts a bridge as an expression of a community's will to reshape itself, shows that such bridges are sites at which individuals can contemplate their imbrication in their cultures with particular acuity. Yet Wilder's novel, while firmly involved in precisely such conceptual exploration, develops a distinct permutation of this idea, one uniquely steeped in the American experience. In his vision, the bridge still produces a profound disjunction which must be sutured in the realm of spatial practice. For Wilder, though, because this disjunction is in time and not in space, it cannot be remedied by bodily sacrifice but only by ethical reflection.

* * *

Kipling's "The Bridge-Builders" (1894) concerns the building of a bridge over the Ganges. Critics tend to read this story for its spiritual or political connotations. For R. Ramachandra, the most important bridge built in the story is not material but metaphysical: "*The Bridge Builders* has often, and fairly rightly—been regarded as a work in which two Englishmen toil to provide a bridge from an old world of dying gods to a new and freer life" (87); moreover, main character Findlayson's development "will have to be not in political but religious terms" (88). Ann Parry, however, sees Kipling's tale as far more politically engaged. For her, "we can discover . . . meanings that relate it quite specifically to the contemporary debate about the nature, role, and future of Empire" (2:14). Neither of these approaches, though, leads to particularly close examination of Kipling's meditations on the expressly spatial relationships between the builder's mind, the congress of the gods, and the structure itself.[2]

As "The Bridge-Builders" begins, work is almost complete on the acclaimed engineer Findlayson's great Kashi Bridge over the Ganges at Varanasi, a monumental structure not beautiful in appearance. Its gear-and-girder construction is "raw and ugly as original sin, but *pukka*—permanent—to endure when all memory of the builder, yes, even of the splendid Findlayson truss, had perished" (223). However, rain falls heavily one evening and swells the Ganges, threatening the bridge. Findlayson's entire career is on the line, for "There were no excuses in his service. Government might listen, perhaps, but his own kind would judge him by his bridge, as that stood or fell" (236). While observing the scene, his subaltern Peroo offers him opium; Findlayson takes it and foolishly jumps into a boat on the raging river. Both men end up marooned mid-channel on an island, where they witness a heated discussion among the Hindu gods regarding whether or not to let the bridge stand.

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[2] Elizabeth Ammons, on the other hand, does briefly mention this story in her discussion of engineering technology and literary fiction, but perhaps errs somewhat in the other direction by understating the story's philosophical complexities while contending that it is fully complicit in the era's veneration of the heroic engineer. Still, the present author subscribes more closely to her estimation than to those mentioned above. For Ammons, Kipling's story "dramatizes simultaneously the struggle between mother nature and the modern engineer, and the struggle between the wit and wisdom of dark-skinned people versus the imported intelligence and knowledge of fair-haired colonists. . . . [N]ature, even at its most powerful, fails to wreck the bridge that the white man is raising over Mother Ganges. Clearly, the triumph of engineering and the triumph of empire go hand in hand" (753).

Peroo, a classic subaltern of colonial fiction, is both attentive to the foreignness of his British master's technological acumen and to how his own mastery of it can lift his own social standing. As Kipling puts it, "No consideration of family or kin allowed Peroo to keep weak hands or a giddy head on the pay-roll. 'My honour is the honour of this bridge,' he would say to the about-to-be-dismissed. 'What do I care for your honour? Go and work on a steamer. That is all you are fit for'" (227). Bhabha, as it happens, applauds developments in postmodern theory which allow "the articulation of subaltern agency to emerge as relocation and reinscription" (193). In acting as interlocutor between engineer and bridgeworkers, it follows, Kipling's subaltern Peroo may subvert the imperial project by translating its technology's language into a locally-inhabitable, non-disruptive form. Or, perhaps more plausibly, Peroo's actions are Kipling's illustration of how the imperial project must be pursued sensitively in order to be realized most effectively and profitably, with a minimum of resistance from the locals. In any event, the Indian critic Ramachandra finds real value in this character: "The suspension bridge is at once the most primitive and the most modern of all types of bridges, and in the expression of Peroo's choice Kipling captures well the paradoxical nature of the Indian who combines in himself the ancient and the modern" (88).

Findlayson's bridge, as Peroo has it, intrudes on both the physical and metaphysical geographies of its site. Speaking frankly to his boss, he says,

> 'I like sus-sus-pen-sheen bridges that fly from bank to bank, with one big step, like a gang-plank. Then no water can hurt. . . . Look you, we have put the river into a dock, and run her between stone sills. . . . We have bitted and bridled her. She is not like the sea, that can beat against a soft beach. She is Mother Gunga—in irons.' (228-29)

What must logically follow, in Kipling's imagination, is some means by which the bridge might be accommodated by those deities and customs its intransigence has offended. A number of arguments are made to Mother Gunga in defence of the structure. The buck, for his part, begs her to consider that in the temporal frame the gods inhabit, the bridge will really only be around a short while: "'Does Mother Gunga die, then, in a year, that she is so anxious to see vengeance now? The deep sea was where she runs but yesterday, and to-morrow the sea shall cover her again as the Gods count that which men call time. Can any say that this their bridge endures till to-morrow?'" (244). Hanuman, appearing as an ape, on the other hand, is pleased to watch the bridge go up, as it recalls to him "'that I also builded no small bridge in the world's youth'" (244). The tigress remonstrates that if the bridge is not destroyed, "Afterwards they will see that Mother Gunga can avenge no insult, and they fall away from her first, and later from us all, one by one. In the end, . . . we are all left with naked altars" (245). Hanuman, however, counters that toward him, at least, the builders have been properly reverential. He observes that he has lately appeared "'before the bridge-builders in many shapes, and because of me they change their faiths and are very wise.'" Because of his success, he exalts, "'I am the builder of bridges indeed—bridges between this and that, and each bridge leads surely to Us in the end. Be content, Gunga. Neither these men nor those that follow them mock thee at all'" (247).

Ultimately, all philosophical discussion aside, Peroo's estimation that "'so many have died in the building that it cannot fall'" (254) proves correct, for as the skies clear the next day, the bridge is still standing. Kipling's imagination thus most closely corresponds to the ancient belief that a bridge may be crossed only at the price of those who have fallen or been thrown from the structure: those whose own passage failed. Passage is therefore *a question of narrative cohesion*, made readable by a context of tragic incompletion. In order to receive the full benefit of cosmopolitan modernism, a community of local standards of practice must be established at a cruel price: violent bodily movement (bridgeworker deaths, sacrifices) transforms into a new language which underwrites successful movements through space to come.

In Margaret Laurence's "The Tomorrow Tamer" (1963), the need to make a human sacrifice to the structure is manifested in remarkably similar terms. This title story of a collection of short fiction set in Africa also details the construction of a modern suspension bridge in a colonial setting; unlike Kipling, however, Laurence's main character is not the chief engineer but a young bridgeworker caught between two cultures. As it is, W.H. New evaluates this particular story tepidly, even compared to others in the same volume. For New, the tale's subject is "rich with irony," but its "perspective is fundamentally unclear":

> is the story itself to be a celebratory tale? is it to be an external, analytical, psychological study of the boy? is it to be an omniscient enquiry into the different world-views of the villagers, the workers, and the engineers? In fact it tries to be all three, which means that it runs aground on its own methodology, on the opposition between its narrative telling voice and its authorial seeing eye. (121)

New does not appreciate, however, that in encoding such disconcerting conceptual slippage into her telling, Laurence does an exceptionally sophisticated job of capturing the changes wrought by the intrusion of modern standardized forms into the spatial practice of remote communities. Where New sees an unclear perspective, I would point to a sophisticated oscillation between different extant ways of telling spatial stories. Like Willa Cather's Bartley Alexander, Laurence's Kofi is producing not a shape but a means of motion he and others will later use, and is in the process at risk of losing his identity to the structure. For New, the weakness in this story's plot is that "Despite the fact that the overarching narrative structure and the articulated theme are those of the cyclical myth, the internal narrative records by means of 'Europe time' not a cyclical but a linear history." This precise disjunction, however, is one of the story's great strengths.

"The Tomorrow-Tamer" is set in a small inland bush town where a colonial government has decided to build a bridge as part of a trans-national transportation route. At the outset, the village's history and geography are intact and organic: Kofi, a young man, is seen running "Past the thicket of ghosts, where the graves were, where every leaf and flower had fed on someone's kin, and the wind was the thin whispering speech of ancestral spirits" (78). When the European bridgebuilder arrives, the villagers become worried that Owura, the river god, will disapprove of the bridge's construction, so Okomfo Ofori, the "priest of the river" (87), presides over a ceremony where it is decided that Kofi will go to work on the bridge (88). Kofi is paid well to work on the construction project and in doing so is exposed for the first time to both Europeans and Africans from other regions.

Ethnic and class hierarchies persist among the workers, and Kofi's attempt to overcome them and rise in station becomes the story's chief theme. "The white men rarely showed their faces in the village, and the villagers rarely ventured into the strangers' camp, half a mile upriver," we soon discover. In essence, a conceptual bridge is needed between these groups, for "The two settlements were as separate as the river fish from the forest birds. They existed beside one another, but there was no communication between them" (90). Kofi does not want to be this go-between, though, so much as to join the peripatetic ranks of the bridgebuilders wholesale. In a poignant scene at a bar where bridgeworkers congregate to have a good time, Kofi asks a coworker to assure him he is "'one of the bridgemen. . . . Say it is true.'" The man puts his hand patronizingly on Kofi's shoulder, saying, with a conspiratorial wink to the bartender, "'You are a bridgeman, bush boy. Why not?'" (97).

In the meantime, the bridge's construction causes catastrophic upheaval in the life of the village. One morning, machines tear up a particularly significant piece of the ancient forest: "Everyone had thought of the river's being invaded by strangers. But it never occurred to anyone that Owura's grove would be destroyed" (93). This loss is not only physical and spiritual, but an epistemic destruction of cultural memory itself. Soon, to the townspeople, "the river bank no longer seemed bald without the grove. Kofi could scarcely remember how the palms had looked when they lived there. Gradually he forgot that he had been afraid of the machines. Even the Europeans no longer looked strange" (94).

Kofi is at one point called upon by the villagers as the bridge's designated representative to account for its destructive presence. He does not argue, however, that it has angered the gods in its human ambition, but that it is possessed of its very own god: "'Something is dwelling in it [the bridge],'" he says, "'—something strong as Owura himself'" (99). Having made this declaration, Kofi gradually evolves, in the eyes of the village, into the bridge god's priest. The bridgebuilders do not recognize this title as valid, however: upon being told that the new bridge will not require a permanent tender, as Kofi had imagined he might become, "He heard only one thing—the bridge did not need a priest."

What most upsets him, in the end, is that the bridge will lose its identity as an isolated structure towering over a local community as it is joined to a route connecting larger continental regions. At first, Kofi mentally resists the bridge's intended function as part of a greater transportation network. He thinks of the bridgemen, "coming together for a while and the separating once more, going away to look for other places, somewhere. The thought could not be borne. He clicked it off like the little light of the green and silver torch" (101). Yet one day, whilst painting the structure, he sees a "straight red-gold streak pieced like a needle through the forest." This intrusive presence is the coming new road, which will cross the bridge, and "string both village and bridge as a single bead on its giant thread" (102). At this crucial moment when Kofi realizes his life is to become linked to that of others in transit—those perhaps nowhere truly at home—he is oddly ennobled. "He was no longer the bridge's priest," we discover, but "now the thought could be borne." As he has desired, he is no longer of his village, for "In the far places, men would recognize him as a bridgeman" (102). He is not a local priest anymore, but a member of a cosmopolitan class who work with a pragmatic, universal technology which has no apparent spiritual trappings.

Then, he looks up, slips, falls into the river, and disappears forever. The villagers realize that "The bridge, clearly, had sacrificed its priest in order to appease the river. The people felt they knew the bridge now. . . . The river had been acknowledged as an elder. The queenly bridge had paid its homage and was a part of Owurasu at last" (103). As in Kipling's story, proper restitution has been made and the bridge may keep standing, in new harmony with its locale. The dialectic between cosmopolitan modernity and local tradition has been resolved at the death of one who has attempted to bridge these two realms. Only when the corporeal is transfigured into the spiritual can sanctified crossing—and its inevitable tendency to change the shape and texture of local communities—occur.

Intriguingly, Laurence never reveals exactly who or what the "Tomorrow Tamer" is. Is it Kofi, who in his hubris attempts to make his own tomorrows instead of accepting those provided for him? Or is it the great bridge, representing a standardization of existence which defeats time? Or, for that matter, is it the river itself, *contra* Heraclitus, asserting its timelessness in the face of the bridge's technological advance? The very ambiguity of this identity is suggestive, for in a sense all three presences here become intertwined within the story. The price of identification in this cultural moment of intrusion, it seems, is that linear temporality must be overcome. Tomorrows must be tamed in order for the bridge to serve the local community and the wider region as passage; for human beings who build great bridges, the only way to escape time's relentless forward advance is death.

Likewise, in the Albanian writer Ismail Kadare's *The Three-Arched Bridge* (1978), a short novel inspired by Ivo Andrić's *Bridge on the Drina* (see Chapter IV for a discussion of Andrić's novel), the same bridge which allows for passage through space is fundamentally that which engages people in historical time. The novel details the construction of a bridge in the Albanian peninsula in the context of the Ottoman Empire's expansion in 1377, centring on a man whose body is encased in the bridge's supports. Conspicuously, like Kipling's and Laurence's texts, critics have serious hesitations about this novel, albeit in this case mainly due to its author's frequent anti-Muslim public statements and complicity with a political regime in Albania widely seen as corrupt. Emily Apter, for one, finds much to admire in *The Three-Arched Bridge*'s portrayal of war's tendency to erupt in the Balkans over language itself, yet cautions against "a neutral reading of this decidedly negative portrayal of linguistic Ottomanization in the light of Kadare's political orientation." She points out that while living in exile in Paris, Kadare was acknowledged for his "pro-Europe, anti-Turkish, and anti-Islamic stance," even having produced a political pamphlet on "the anatomy of tyranny" which "refers derisively to the 'baggage of the Ottoman overlords' while longingly prognosticating 'a great rectification of [Albanian] history that will hasten its union with the mother continent—Europe'" (71).

Arshi Pipa, on the other hand, locates *The Three-Arched Bridge* in a period of "steady devolution" (71) in the quality of Kadare's fictional output. He finds Kadare "playing a double game or selling out" to corrupt Albanian political leaders (especially the Communist dictator Enver Hoxha, whose brutal regime endured for four decades in the mid-20th century), to the extent that the author's entire oeuvre ultimately exemplifies "the unholy alliance between dictatorial power and literary talent" (77). Although I agree that Kadare's pronounced dislike of Muslims badly mars *The Three-Arched Bridge*, I also suggest that the novel contains particularly well-developed thoughts on the oscillation between myth and reality through language involved in (and necessary to) the building of a great bridge. While Kadare's bridge also requires a local to die in order to keep standing, this local's death does not, as in Kipling and Laurence, so neatly solve the bridge's problems for all concerned.

All bridges in *The Three-Arched Bridge*, whether bridges of words, ideas, or stone, are inextricably intertwined with corpses; they threaten to turn into corpses themselves, *which is the state of not allowing passage*. Kadare pointedly makes reference at one point to folkloric "Corpse bridges," which are "not bridges built over rivers or streams or chasms, or indeed over any kind of gap that had to be crossed." Instead, they are objects devoid of the potential to move bodies dynamically in space—"They were bridges built in the middle of fields, and their only service was now and then to carry on their backs great ladies, who climbed on them to observe the sunset together with their invited guests" (102)—and are therefore themselves dead.

The Three-Arched Bridge is in large part about the bridge's effect on language itself as it is built. The novel, in its English translation by John Hodgson, commences in a kind of archaic medieval language ("*I the monk Gjon, the sonne of Gjorg Ukcama, knowynge that ther is no thynge wryttene in owre tonge about the Brigge of the Ujana e Keqe*" . . .), and segues immediately into contemporary language (. . . "have decided to write its story" [1]). The first-person narrator is a monk who is repeatedly called to translate among the local prince and his court and the foreign builders and bridgeworkers. The people who have peacefully operated a rudimentary ferry at the bridge's location for years speak perfect Latin (18), but the arrivistes speak a "jabber," a creole of several languages.

The Turks, who are building an empire, are the forces of cosmopolitan standardization here. In buying an ancient roadway, they pay "in fourteen kinds of coinage—Venetian ducates, dinars, drachmas, lire, groschen, and so forth—making their calculations in eleven languages, not counting dialects." Instead of just purchasing this old road which passes through "some forty principalities, great and small," they appear, much like the government in Laurence's story, to be "winding the old roadway, so gouged and pitted by winters, summers, and neglect, onto a reel" (25-26). Regarding such standardized transportation networks, Kadare incisively notes that "As soon as tar begins to move fast along the highways, you know that blood will flow after it" (110).

As in "The Bridge-Builders" and "The Tomorrow Tamer," Kadare's cosmopolitan bridge presents an indignity to the river itself. Soon, the river looks "like a squashed eel, and you could almost imagine that it would shortly begin to stink. Regardless of all the damage it had caused, people began to feel pity for it" (40). As the bridge rises, Kadare writes, "Meanwhile the Ujana e Keqe looked more askance at us than ever, or perhaps so it seemed to us because we knew of the stone clasp placed over it" (56). Soon, the partially-built bridge starts to be mysteriously damaged at night. One of the builders approaches the monk to see if the local language and lore contains any precedent for dealing with this egregious state of affairs. The monk relates an old ballad of a wall which had demanded a sacrifice to stand up, and the tragic yet successful immurement of a bride within it (89-92). Once the tale is told, the builder knows he must make similar arrangements for the new bridge. He therefore pays a man to be walled up in the structure (the money will pass to his family, and ensure their financial stability), with his exposed head to be encased in plaster (114). The man is a local Albanian, and thus, as Pipa points out, "is emblematic for the victimized Albanian people" (72). "His open eyes," states Kadare, "with their crust of plaster had the silence and unresponsiveness of that 'never ever' that only death can bring." The "never ever," in fact, is the man's removal from time itself, for "During the first week his parents aged by a century," along with the rest of his family. He, however, "leaning against the arch of the bridge as if against a stone pillow, entirely smoothed over, studied them all beyond the plaster barrier that made him more remote than a spirit" (127). Unable to cross, the immured man never ages. The bridge's imprisonment of this man in an unchanging state, moreover, offsets any sense of progress the bridge will offer those who cross it; right from the beginning, it has been structurally encoded with unclear, politically controversial imperatives. It offers no easy path for the region to move out of its unending unrest, but only contributes to maintaining this unsettled state.

Earlier, the monk has explained that his people's fiction, their ballads, arise from the pain the living experience from not being able to communicate with the dead. In these ballads, "the dead, crossing to this side temporarily . . . redeem a pledge they have left behind or a promise they have made" (87). Language, in other words, bridges space metaphysically: it exists to allow movements which the body cannot perform in space—an enterprise founded on abstraction. Yet the immured man himself, trapped between life and death, is a kind of unwelcome bridge: "everyone realized what a great burden an unburied man was, not only on his family but on the entire district. It was something that violated everything we knew about the borders between life and death" (128). The body itself cannot be transformed into an abstraction—that is, a language—if it cannot move in space or time or change with age.

Soon, the bridge opens, and first to cross the completed structure is a tar-train (145), the harbinger of war. Right away, a drowned body floating in the river strikes the bridge (149), seeming to say "How are you, brother?" to the immured peasant. Tellingly, the incident quickly fades into unreality in the area's collective memory, and "By the bridge piers, time, swirling like water, seemed to have stood still" (149). The mixed metaphor of this phrase is actually quite evocative: "swirling" would seem to indicate movement of a sort, but not the kind of movement that resolves into a meaningful advance, such that it would not effectively seem to stand still. The problem is that the stories these people have told to practice space are colourful and allusive, but not conducive to altering the flawed world as it now stands; when applied to this new built structure, they turn out to be not ones of progress, memory, or history, but of stasis. For a long time, most of the townspeople refuse to cross on principle. And then, gradually, the bridge begins to be accommodated. For one thing, "Surprisingly, people began to cross the bridge more and more often after the toll was imposed" (159). Passage, with the coming of a language of economic exchange, can now *mean* something coherent to the community, whose previous practice contained no precedent for actually crossing over. Moreover, with such use, the structure begins to develop a whole new language. The monk reports that in his leisure time, "I enjoyed choosing a sheltered spot and observing the bridge. The bridge was like an open book. As I watched what was happening on it, it seemed to me that I could grasp its essence." It is made readable to him, in fact, by how people variously choose to practice the space. It strikes him that "human confidence, fear, suspicion, and madness were nowhere more clearly manifest than on its back. Some people stole over it as if afraid of damaging it, while others thunderously stamped across it" (155).

Yet despite this apparent progress, in the end the novel's vision is bleak. A skirmish breaks out on the bridge between local Albanian guards and Turkish horsemen in which blood is shed. As the novel concludes, the winds of war are strongly stirring. The bridge, despite it all, has never managed to become an abstracted as a "public" space where sheer passage is not immediately meaningful as an expression of blood allegiance: because of the sacrifice required to keep it standing, its crossing remains politicized, and politics here is the production and display of corpses.

* * *

As Leo Marx points out, American writers too have also used a narrative arc of intrusion and accommodation to characterize the arrival of modern transportation technologies in outlying settings. He finds that "again and again our writers have introduced the same overtones, depicting the machine as invading the peace of an enclosed space, a world set apart, or an area somehow made to evoke a feeling of encircled felicity" (28). The crucial factor, however, is that unlike those in colonial situations, the populace at large received such developments with unambiguous enthusiasm in the 19th and early 20th centuries. "The invention of the steamboat had been exciting," he ventures, "but it was nothing compared to the railroad." By the 1830s, Marx relates, the locomotive was viewed as "the embodiment of the age, an instrument of power, speed, noise, fire, iron, smoke—at once a testament to the will of man rising over natural obstacles, and, yet, confined by iron rails to a pre-determined path, it suggests a new sort of fate" (191).

The same implications, I add, were frequently attached to long-span bridges as well: here was a newly-possible means of crossing over previously impassable obstacles; here also was directionless flux coalesced into one great common way, a path redolent of destiny. In the words of *Harper's Monthly Magazine* writer Archibald Henderson (1910), "The whole meaning of progress is summed up in the bridge—at once a daring symbol and a splendid reality. For it is only in spanning the impassable, in bridging the chasm of the unknown, that man moves forward to that greater spiritual work which is itself a bridge from the material to the sublime. Man seems at last to be touching the very hem of the garment of the Archangel of Matter" (927). Yet even in the agricultural heartland, American gear-and-girder bridges were not seen to belong to the technological and cultural enterprise of a distant and imposing imperial metropole; instead, they were received as emblematic of what the locals themselves truly were, or at least wanted to be. In these situations, having been conceived by those trained under "our" egalitarian and scientifically curious ideology, they tend rather immediately to raise the question of how "we" should cross them—that is, what (if anything) people find in common with one another in the midst of their common passage.

The conceptual progression of Thornton Wilder's evocation of his bridge's function in *The Bridge of San Luis Rey* is similar to the literary takes on colonial situations discussed above. Once more, the question of crossing, sheerly in needing to be asked, is always a marker of some sort of disjunction. However, even if this disjunction involves profoundly unequal hierarchies along class and ethnic lines, for Wilder it is not one of spatial but of temporal removal. The bodies which fall from his bridge, instead of satisfying the sacrifice needed to ensure a structure's integrity, only rupture existing understandings of necessity and lead to searching questions over why tragedy needs to occur. As such, he needs to find a way to make the victims' stories readable for those crossing the reconstructed bridge in the future.

Such a need for the storyteller to inscribe a history of tragedy on a built span has several precedents in North American folk legends (or at least in self-conscious attempts by individuals to create plausible folk legends).

These tales often imagine that bridges can quite literally speak the tragedies which have occurred during their construction. One famous example is the great Canadian troubadour Stompin' Tom Connors' "The Bridge Came Tumblin' Down" (1972), written to preserve the memory of a tragic collapse of a bridge under construction in Vancouver in the 1950s. The first two verses are as follows:

> Nineteen scarlet roses
> The chaplain spread around
> In the waters of Burrard Inlet
> In old Vancouver Town
> Where the bridge came tumblin' down
> When the bridge came tumblin' down
> Nineteen men were drowned
> In June of nineteen fifty-eight
> In old Vancouver Town
>
> There were seventy-nine men working
> To build this brand new bridge
> To span the Second Narrows
> And connect up with the ridge
> Till a big wind hit the bridge
> And the bridge came tumblin' down
> And nineteen men were drowned
> And the medical corps couldn't be too sure
> Of the rest of the men they found.

As the chaplain spreads the roses, they become imprinted on the location so that others crossing in the future may be granted a mystic vision of them: "Now if you're ever crossing / This mighty bridge sublime / And nineteen scarlet roses / Pass before your mind / Remember and be kind." History is physically marked on the site and the song, and is entered into in the act of crossing. In a more humorous but still poignant example, when the widely beloved bugler Anthony drowns at the end of Washington Irving's *Knickerbocker's History of New York* (1858), a bridge is built at the location "to guard against such melancholy accidents in the future." And yet, while crossing this bridge, people often hear Anthony's trumpet, "of a stormy night, mingling with the howling of the blast" (498). While these "legends" (both actually belong entirely to the authors in question) are compelling, the truth is that in using bridges, stories of the tragedies which have occurred on them are, for most people, not magically whispered on the wind. Addressing their silence, for Wilder, is the ethical challenge posed to the narrative spatial practice of bridges.

Wilder's novel concerns not the moment of a bridge's erection and its subsequent use but of its collapse. Yet like those bridges constructed in the stories above, its physical functioning presents a challenge in community standards of spatial practice. This book has received virtually no critical attention in recent times, a shame given its importance as a contribution to American dialogues about how people experience the spaces they have built. To be sure, the Bridge of San Luis Rey is not a giant modern-day gear-and-girder technological wonder, but a much more modest traditional rope footbridge in Lima, Peru. In fact, most of the novel's explicators have barely acknowledged that this bridge has any material or spatial function at all. Helmut Papajewski and Hermann Stresau separately comment little about the bridge's physical aspects, other than to note that its design and location allow for an unusually moving view of the natural landscape.[3] Kuner at least briefly notes that Wilder "spends some time describing the bridge physically: how well it is built, of what it is made, how proud the people are of its fame. It is quite important as a utilitarian object. We are so lulled by the ordinary, it seems so much part of our own lives, that we look no further" (67). The exact nature of its physical functioning and collapse, however, *as the disintegration not only of object but of passage*, engages the same difficult moral issues as Willa Cather's Québec cantilever. As Peter G. Christensen suggests, "Brother Juniper presents us with narratives, but draws little in the way of conclusion from them" (197). As such, the terms of reference become conspicuously spatial, for "Each character must be judged on the basis of the *trajectory* of life, not in relation to a static degree of virtue" (198; emphasis added).

For Wilder, the rope bridge is a kind of condenser, making five people with completely different life stories crossing the bridge as it gives way share the same fate, one which can be measured against those of all others who have made this identical passage. Brother Juniper, a Franciscan monk, hears of the tragedy and sees in it a "laboratory" (19) to divine the will of God, for "Here at last one could surprise His intentions in a pure state" (20). He figures that "Either we live by accident and die by accident, or we live by plan and die by plan" (19). By learning of the lives of all the victims, he will be able to tell what they had morally in common and from that draw out a clear path for others to follow. However, such answers are simply not forthcoming, for "The longer he worked the more he felt that he was stumbling about among great dim intimations. He was forever being cheated by details that looked as though they were significant if only he could find their setting" (217). The victims all turn out to have been neither unambiguously good nor bad, yet the spatial context of their behaviour, lacking in most cases, is crucial to evaluating their morality. The point seems to be that since we cannot know the reasons why such things happen to people, the bridge is one between unclear origins and unclear destinations.

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[3] For Papajewski, "As Brother Juniper approaches the bridge, the sight of the Andes at the very moment of the catastrophe is made by the author to serve to contrast the momentary tragedy with everlasting nature. Shortly before the five victims of the disaster reach their goal they behold the stars" (24). Similarly, in Stresau's opinion, "The reader is also likely to be impressed by descriptions of some very lovely moments. He is not offered many such pictures, but their very paucity makes them more telling. One example is the terse description of the landscape when, shortly before the accident, Brother Juniper sees the snowy peaks of the Andes and remembers the biblical words about the mountains from whence 'help cometh.' Or the old Marquesa, on the night before her death, looking at 'the stars that glittered above the Andes'" (26).

Indeed, the physical bridge in this novel, as a delineation not only of enabled passage but of foreclosure on possible routes of crossing (including, finally, its own), creates the very basis for narrative itself. At the novel's beginning, Wilder writes that

> The bridge seemed to be among the things that last forever; it was unthinkable that it should break. The moment a Peruvian heard of the accident he signed himself and made a mental calculation as to how recently he had crossed by it and how soon he had intended crossing by it again. (16)

In collapsing, the bridge paradoxically affirms its ability to create community, by giving all of its various users an unusually heightened sense of common pursuit and a benchmark against which to evaluate their own participation in the passage afforded by the structure. Yet elsewhere, we are told that Dona Maria and the Abbess, "the two great women of Peru (as the perspective of history was to reveal them)," only met once in person, "on the day when Dona Maria called upon the directress of the Convent of Santa Maria Rosa and asked if she might borrow some bright girl from the orphanage to be her companion" (58-59). The perspective of history, capable of retroactively granting not only greatness, but, more fundamentally, *once-and-for-all-ness*, is itself granted by a tear in the functional fabric of built space.

Ironically, all of the victims, we discover, have just made major decisions about how they will move forward having recently experienced major disruptions and tragedies in their lives, a detail which Brother Juniper somehow overlooks. As Burbank has it, "Each of them, it turns out, is a person with deep spiritual attachments whose 'central passion' is thwarted either by emotional coldness or selfishness or by natural circumstances" (42). Even before the collapse, each anticipates that their crossing will effect the final stage of their personal transformations, even to the point where "As they drew near to the bridge of San Luis Rey, Jaime tried to conceal his shame for he knew that one of those moments was coming that separated him from other people" (207).

Put another way, each of Wilder's characters has approached the bridge as a significant step in a process of personal transition, but it is only retroactively that the moral nature of such transition may be assessed. Accordingly, the problem of *just keeping going*, in a world devoid of clear moral imperatives, becomes extremely difficult for those not fated to fall from the bridge. While consoling Esteban for the death of his brother Manuel, Captain Alvarado says, "We do what we can. It isn't for long, you know. Time keeps going by. You'll be surprised at the way time passes." At this moment, the narrator sympathizes, for although the Captain "was the awkwardest speaker in the world apart from the lore of the sea, . . . there are times when it requires a high courage to speak the banal" (139). Similarly, near the end the Abbess is forced for a time to accept that it was of no importance whether her work went on or not; it was enough to work" (224). We may judge people only by their trajectory in life, but Wilder suggests here that it is difficult to tell whether any given trajectory is inherently any more noble than any other, so many trajectories are pursued merely for the sake of moving somewhere, anywhere. Overall, in point of fact, Wilder's vision is not really bleak. His novel advances, at times quite explicitly, an argument for literature not as the production of clever technical effects or measurable convictions, but as text functioning as the register of emotional truth. The narrator directly criticizes Dona Maria's son-in-law for enjoying her letters to her daughter for the wrong reasons, "missing (as most readers do) the whole purport of literature, which is the notation of the heart" (34). As long as one is moving in a direction which leads to some kind of meaningful connection to other people, reasonably positive progress is underway; there is no wider conceptual frame of reference to evaluate the rightness of this movement.

Despite its having won the Pulitzer Prize for 1928, as with other texts discussed in this chapter a great many of *The Bridge of San Luis Rey*'s critics have found in it significant shortcomings. Rex Burbank suggests that "Its most noticeable weakness is the episodic structure" (48); Malcolm Goldstein calls it "imperfect," though allows that "its faults are not ruinous" (60); Papajewski argues that the novel possesses "aesthetic inadequacies" such as an "excessively repetitive thematic quality" (35-36). Yet "this excessively repetitive quality" is precisely what the book must employ in discussing such a space as a public bridge which collapses. Each person may walk a different route through the streets, highways, and general landscape on each side of the gorge, but each must take the same narrow, precarious route in crossing.

Wilder is able to formulate a poetics of space here which, like Kipling, Laurence, and Kadare, involves failed passage as the basis for spatial language. The new stone bridge built to replace the collapsed vine-suspended span at the novel's conclusion is a metaphysical junction between not only places but times as well. In essence, the success of this new bridge is not only to remain standing (indeed, it threatens to collapse at all times), but to demand from subsequent users not the gift of a human corpse but the practice of *sustained ethical challenge*. Near the end, Wilder writes that the original catastrophe "has not been forgotten. It has passed into proverbial expressions. 'I may see you Tuesday,' says a Limean, 'unless the bridge falls'" (211). All people, in using this new language, are now implicated in the tragic fall: those that fell were doing nothing any better or worse or different than the rest of the people who have crossed and will cross the bridge on a regular basis. Once this egalitarianism is established, morality becomes a matter of understanding our essential connection to one another across both space and time. Accordingly, the novel concludes with the Abbess's reflections: "the love will have been enough; all those impulses of love return to the love that made them. Even memory is not necessary for love. There is a land of the living and a land of the dead and the bridge is love, the only survival, the only meaning" (235).

Before concluding, a few words are in order about a much more recent novel, the Canadian author Michael Ondaatje's *In the Skin of a Lion* (1987), for it represents a hybrid form between the two broad narrative patterns delineated in this chapter. On one hand, it is a novel of bridge construction where falling bodies underwrite the bridge's structural integrity and intended function; on the other, it is a story about a language which connects disparate people to one another through time as they practice the space of their city into existence.

Unlike the critics quoted above, commentators on *In the Skin of a Lion* have been much more attuned to the ways in which the author's ethical vision is realized through physical spatial practice, even if the resulting authorial voice often itself seems episodic or inconsistent. For Branko Gorjup, the novel is a narrative of a city's progress from chaos to geographic coherence: "Ondaatje's Canada has become a place invested with inheritance; it has emerged, like the novel and like the novel's main character, Patrick Lewis, from a nameless landscape" (89-90). "Names of streets, public buildings and people," Gorjup perceives, "have to be gradually de-codified and then transformed into the subtext of his personal history" (92) in order for him to locate himself meaningfully within the fabric of the city. In Rochelle Simmons' reading, "Like Leonardo da Vinci's drawing of the Vitruvian man, which epitomizes the Renaissance humanist tradition, [bridgeworker Nicholas] Temelcoff makes the universe commensurate with the proportions and movements of his own body. In so doing, he renders the unknown knowable" (9). Likewise, for Sergio Perosa, the building of twentieth-century cities in North American involves not boundary-marking so much as the construction of "linking devices: a central bridge, a viaduct, a tunnel, a reservoir." These structures, Perosa contends, are "characterized by kinetic, rather than static, features and patterns; they live and are made to exist in the flow of movement and people." Due to this emphasis on motion and interchange, the cities they create do not offer safe, settled existence. Instead, "their distinguishing features are intended to link rather than separate, to unify rather than divide, to allow for conditions of roaming, ranging, wandering: *in* the cities themselves, and *from* them into the countryside or the wilderness" (185). While such space can be at times disorienting, it also resists such negative developments as ethnocentrism and closed-mindedness in general. Indeed, in cities, writes Perosa, "Bridges, viaducts, tunnels, are meant or suited for new nomads, internal as well as external nomads, rather than settlers" (185).

All of these arguments are quite well-taken; however, I must add that in the process of narrating the city of Toronto as coherent entity, much like *Alexander's Bridge*, *In the Skin of a Lion* is as much about crossing the Prince Edward Viaduct in different ways at different times as it is about the language of this particular bridge's initial construction. In this novel, the uncompleted Bloor Street Viaduct is "a path that disappears into whiteness" (39). Just as it is about to open, a man on a bicycle breaks though the line of policemen and crosses: "He wants the virginity of it, the luxury of such space. He circles twice, the string of onions that he carries on his shoulder splaying out, and continues" (27). The crowd greets his actions with a hearty round of applause: the space has been claimed by the public, by the unofficial, not by the fat cats who control the city. Still, Commissioner Harris, whose initiative has moved construction ahead, has often come out to the bridge at night during the time of its erection. Like the great engineers discussed here in Chapter II, the bridge has existed fully formed in his mind before being built: "Before the real city could be seen it had to be imagined, the way rumours and tall tales were a kind of charting" (29). Yet Harris is not as sympathetic a character here even as Cather's Bartley Alexander, for Ondaatje describes in detail not only the tragic deaths among the workers, but their anger that their lives are so poorly valued. After Patrick becomes politically active, he confronts Harris in the new water purification plant. "Think about those who built the intake tunnels," he demands, "Do you know how many of us died in there?" Harris coldly returns, "There was no record kept" (236).

The novel, however, is not simply a lionization of the informal and the messy aspects of the human experience as opposed to the principles of order and organization. Some significant moments of rupture occur early in the novel, and the plot goes about finding humane, graceful ways to suture them. One rupture is linguistic: Nicholas Temelcoff, the daredevil bridgeworker who swings from ropes in the air, has emigrated to Canada from his native Macedonia and has had to learn a new language. For him, "language is much more difficult than what he does in space. He loves his new language, the terrible barriers of it" (43). He, and the other workers, learn English by singing popular radio songs and repeating the lines of theatre and film actors (as such, states the narrator, "The event that will light the way for immigration in North America is the talking picture" [43]). Another is corporeal: after several workers have already died, the bridge attempts to claim one more life, except unlike all examples cited above, only succeeds part-way. A group of nuns mistakenly walks out on the incomplete bridge one evening, where a gust of wind sends one plummeting off the edge. Temelcoff, however, a man who "links everyone" (35) on the job, is swinging on a rope below and catches her. They walk away unseen, and she takes the opportunity of her disappearance to pursue a completely new life; thus, her only bridge to her past is Temelcoff, the builder of bridges. As Simmons trenchantly puts it, he "performs a crucial connective function in the building of the Prince Edward Viaduct" (12).

Earlier on, Temelcoff is described as a person who lacks a language to evaluate his practice of space: "He never realizes how often he is watched by others. He has no clue that his gestures are extreme. He has no portrait of himself" (42). In the meantime Patrick Lewis, while researching his lover Alice Gull's past, encounters Temelcoff's presence and his contribution on the bridge. First, Patrick finds an official history of the project in a library file of newspaper clippings that inform him "It had taken only two years to build. It had taken years before that to agree on how it was to be done, Commissioner Harris' determination forcing it through" (143). Then, suddenly, he sees Temelcoff, whose face he recognizes from pictures belonging to Alice, named in a photograph in an article about on-site daredevils. Leaving the library, it all comes together for Patrick in a famous passage:

> His own life was no longer a single story but part of a mural, which was a falling together of accomplices. Patrick saw a wondrous night web—all of these fragments of a human order, something ungoverned by the family he was born into or the headlines of the day. . . . [T]he detritus and chaos of the age was realigned. (145)

Almost immediately after this sudden sense of coherence is expressed, Ondaatje shows us a much older Temelcoff, a man who "never looks back," in a moment when he evaluates his progress by considering how he has practised the space of the bridge at different times. No longer a bridgeworker, "He is a citizen here, in the present, successful with his own bakery." Still, while driving his bakery van across the Bloor Viaduct, "he pauses now, reminded about the details of the incident on the bridge" (149), and at this moment, "Nicholas is aware of himself standing there within the pleasure of recall. It is something new to him. This is what history means." Now, he finds, "he will begin to tell stories." That night, he starts off, and "in bed shyly he tells his wife the story of the nun" (149). At once, then, the interrelationships between people in the city fall into place, and a character who has been an integral part of this community is able to give coherent voice to the inchoate stories told by the bridge. These stories do not belong only to Temelcoff, for he cannot tell them until the actions of others have helped to develop the coherent connections by which they may be told, and the telling of them only reinforces the sense that for everyone, passage over the bridge is a matter of participation in a community.

Importantly, however, Ondaatje never loses sight of the social disparities which make such community-building a contested enterprise. Beyond Temelcoff's role as joiner of all, in one poignant moment the bridgeworkers themselves eloquently overcome the forces of death, chaos, and indifference to suffering. The night before the bridge officially opens, "the workers had arrived and brushed away officials who guarded the bridge in preparation for the ceremonies the next day, moved with their own flickering lights—their candles for the bridge dead—like a wave of civilization, a net of summer insects over the valley" (27). This commemoration is a language of modified practice: by reviving the physical bodies which fell down by lights as ethereal lights that cross successfully, the workers assert the standards of a particular community which holds that if one crosses a certain, ceremonial way, the memories of the dead will be recalled. Overall, by combining the notion of a falling human body's being necessary in the development of a language of spatial practice and the narrative of a bridge as a crossing experienced on an almost religious plane—an idea we will see developed in detail in the texts examined in Chapter IV—where people's mystical connections to one another become apparent and where the imperative is always ethical, Ondaatje shows that a *living* person's body can become a language of connection which orders the chaos of a modern city.

According to David E. Nye, "Technologies are part of a dialogue between human beings about their differing perceptions. Their dialogue takes the form of narratives, different stories we tell each other to make sense of the transformations that accompany the adoption of new machines" (3). What we have seen in this chapter, however, are *narratives about the development of narratives* necessary for bridges to keep standing and to be accommodated within the spatial practice of existing communities. At least one person needs tragically to fall in crossing in order to bring a giant bridge back to the scale of the human and to sanctify all later successful crossings by humans. As spatial practice, the resulting passage is a story of the body's being reminded of its affinity with other bodies. For a writer like Wilder, though, the question is an ethical one regarding people's connections to one another not only across space but across time. His bridge, like those discussed in Chapter I, is inherently a machine for forgetting, requiring the author of fiction to transform it into a machine for remembering and telling.

As a bridge turns into a machine for telling, however, its function becomes more and more mythical. As such, we will next examine a further phase of a bridge's existence: its continued functioning long after its passage has initially been incorporated into community spatial practice.

IV: Bridges as Structuring Metaphors for Narrative in Andric, Crane, Kazin, and Miller

The texts in this chapter all concern that greatest of gear-and-girder age structures, the Brooklyn Bridge. In Mayor Abram Hewitt's famous assessment (discussed here in Chapter I) that it produced "perfect stability," we see that it was not originally celebrated for making new, unexpected meanings possible, but for proscribing them. Time, however, has a way of causing unpredictable lore to be accreted to these structures of passage, and in the works examined herein, this bridge transcends the physical to co-occupy the author's consciousness in the creative realm of fictional composition. I therefore follow several previous authors in suggesting that the notion of the bridge as site of metaphysical transformation reaches its fullest expression in Hart Crane's long poem *The Bridge* (1933). However, this chapter argues that although the poem is only loosely narrative in structure, what is at stake more than anything else for Crane is not an atemporal higher state of consciousness, *but the possibility of coherent narrative itself*. Once Crane has proposed new ways of telling, in works like Alfred Kazin's *A Walker in the City* (1951) and Arthur Miller's *A View from the Bridge* (1955) the Bridge becomes less and less physical in its manifestation and yet more pervasive as structuring metaphor for narratives of experience.

Like many of the other works discussed earlier in this dissertation, several critics have found Crane's poem lacking in overall coherence. Yvor Winters (1930), for instance, approved of many things about the poem, but above all found that Crane, along with Whitman and Jeffers, was "headed precisely for nowhere, in spite of all the shouting" (104). Crane, wrote Winters, had conclusively proved the impossibility of writing good poetry under the inspiration of Walt Whitman: "No writer of comparable ability has struggled with it before, and, with Mr. Crane's wreckage in view, it seems highly unlikely that any writer of comparable genius will struggle with it again" (108). Allen Tate (1932), similarly, opined that "The fifteen parts of *The Bridge* taken as one poem suffer from the lack of a coherent structure" (118) and that the poet's theme is "an emotional oversimplification of a subject matter Crane did not, on the plane of narrative and idea, simplify at all" (119). As such, the main debate regarding the text's achievement has been over whether or not it coheres internally as an artistic and political statement. Some have found the poem well-conceived in general yet variable in the quality of its parts, while for others the parts are mostly excellent as individual lyrics but lack the overall epistemological framework to order them collectively into a fully-realized statement about America's historical development and geographical interrelationships. A third, perhaps majority, group argues that *The Bridge* is indeed unified, not as a narrative statement, but as a mythological progression of states of consciousness.

While many of these approaches considers how the specific structural design of the Brooklyn Bridge conditions the shape of Crane's poem, none broaches the question of how this poem could help construct the experience of the physical bridge. However, as I have argued above, the idea that there exists a physical Brooklyn Bridge outside of any tradition by which it is crossed ignores both the reasons for which it was built and the way it functions for users. Not everyone who crosses the bridge has read this poem (in fact, I suspect, only a tiny minority have), but its reworking of the meaning of passage over the span creates new possibilities and roles for it which, as different writers and thinkers pick them up in various ways, are gradually yet widely disseminated. As such, I am most persuaded by Alan Trachtenberg's alternative contention, made in both his *Brooklyn Bridge: Fact and Symbol* (1965) and "Cultural Revisions in the Twenties: Brooklyn Bridge as 'Usable Past'" (1981), that in Crane's poem the physical bridge "achieves its final transmutation, into a floating and lonely abstraction" (*Brooklyn Bridge* 160). For the poet, Trachtenberg has it, the bridge needed to exceed the material and "rise above the wreckage of history—to rise above itself—and be a pure curveship. The purity was essential; the bridge could harbor no ambiguities. Hence its symbolic radiance became [its] only enduring fact" (*Brooklyn Bridge* 165). The problem is not whether Crane invented the idea that the bridge had a metaphysical function—rather, it becomes apparent that such a notion is produced at the three-way intersection of the pattern of impressions one receives while using it, the moment at which the bridge's origins have passed out of immediate memory and thus become somewhat inaccessible to contemporary perception, and the anxieties of general cultural discourse in a very particular era in American history. As such, the question is one of spatial literacy and influence: that of how Crane has engaged and recast the language of crossing predating and making possible the bridge. Particularly in his later formulation, Trachtenberg implies that we cannot even consider how the Brooklyn Bridge's structural shape conditions the structure of the poem without first studying how the poem, *as a significant contribution to an ongoing discourse of statements about the bridge*, suggestions an alteration of the structure's place in the consciousness of city and nation alike.

Trachtenberg's approach, if extended to a wider range of texts and also to a more detailed consideration of specific aspects of *The Bridge* itself, provides the best basis upon which to understand such texts as parts of a development in a history of discursive modes of spatial practice. Both the idea that a structure can become mythological and the tendency for these mythologies to be abstract or disparate or even completely incoherent result from people's dynamic experience of a structure built long ago which still functions as means of passage. Furthermore, as we shall see, when placed in a wider context of modes of narrating the passage of bridges built long ago, American writers like Mumford, Crane, Kazin, and Miller found unique moral challenge in the midst of the inevitable metaphysical abstraction such narratives describe.

Unlike the American writings we've examined so far, a thread running though much English-language literature about bridges set on the other side of the Atlantic suggests that the dynamic action of passage over bridges leads not to transcendence but to their moral undoing. In T.S. Eliot's vision, after its builders have departed and a completed bridge goes about fulfilling its function, it becomes a location at which, and from which, people are alienated. To be on a bridge is necessarily to be not where one is coming from or going to, but in a state of transition. For a writer like Eliot, however, it is the rationalized space where people, while superficially brought together, are ultimately kept apart. In *The Waste Land* (1922), Eliot writes,

> Unreal city,
> Under the brown fog of a winter dawn,
> A crowd flowed over London Bridge, so many,
> I had not thought death had undone so many.
> Sighs, short and infrequent, were exhaled,
> And each man fixed his eyes before his feet. (39)

Contrastingly, in Trachtenberg's view of the Brooklyn Bridge, "with each successive step, one is tempted to raise one's head to follow the sequence of knots. The movement is upward, until one reaches the stairs leading to the balcony which widens around the massive piers of the towers" (3-4). Eliot's London Bridge, of course, has a flat deck and therefore no sequence of knots to draw one's gaze upwards; there are, however, other things to look at (such as the changing views of the cityscape on each side of the river, for one) while crossing if one wishes. For Eliot, though, each person crossing a bridge only looks down, and endures a transformation only from life into numbing, faceless death.

Time is only intelligible, Eliot implies, as the space in which to make or not make decisions, for as he famously assures us in "Prufrock," "In a minute there is time / For decisions and revisions which a minute will reverse" (5). A bridge *should* inherently be a kind of decision, for as we have argued above, it makes possible a passage through empty space only at the cost of foreclosing on every other possible route through said space. Yet, as the poet suggests in "The Dry Salvages" (1941), bridges do not function in this way because they are nothing but facilitators of efficiency-minded convenience, whose chief function is to assist users in not having to make decisions. People, in their haste and cupidity, he writes, see a river (here, the Mississippi) only as "Useful, untrustworthy, as a conveyor of commerce":

> Then only a problem confronting the builder of bridges.
> The problem once solved, the brown god is almost forgotten
> By the dwellers in cities—ever, however, implacable,
> Keeping his seasons and rages, destroyer, reminder
> Of what men choose to forget. Unhonored, unpropitiated
> By worshippers of the machine, but waiting, watching and
> waiting. (130)

Bridgebuilding, in these lines, is nothing more than a rationalist solving of problems: once completed, bridges and the rivers they cross can be forgotten—in fact, are even themselves machines of forgetfulness for their users. Memory, in this post-Heraclitan intellectual cosmology, is a river's flow; to be granted easy passage is to be numbed from deeper involvement in the spiritual aspects of landscape.

Eliot's views in this regard have many old-world precedents. In Wordsworth's famous sonnet "Composed upon Westminster Bridge, September 3, 1802," the poet is touched by the sight of the City of London in peaceful, early-morning repose, when seen from middle of the bridge. As he himself stops in the middle, city and nature become one ("Ships, towers, domes, theatres, and temples lie / Open unto the fields, and to the sky / All bright and glowing in the smokeless air"), and he rejoices that "Ne'er saw I, never felt, a calm so deep!" The act of crossing here is potentially destabilizing, so the poet is gladdened by the rare opportunity to put it off, to have an epiphany in which all beauty and meaning are contained at one location outside of time's relentless passage. The sonnet's "turn" concludes only that "the very houses seem asleep; / And all that mighty heart is lying still." For once, there need be no recasting, resolution, or redemption; the present, here, is all.

This trope of arrested passage over a bridge also appears, this time negatively, in the American playwright Robert E. Sherwood's play *Waterloo Bridge* (1930), set in the London of the First World War. This playscript commences with the following set description: "A bay in the wall on the eastern side of Waterloo Bridge. The wall is well down stage, so that there is barely room in the foreground for what would be the sidewalk of the bridge" (7). The bridge here, experienced during the dangerous, dark days of war, is so huge a presence that it cannot possibly be of *use* to anyone; instead of offering the hopeful promise of transformation, it only restricts people, pinning them into fixed locations. Moreover, it is a dangerous place to be: during a bombing raid, one character explains that it is empty of pedestrians because "Everyone's in the tubes and shelters already" (23). Yet the possibility that one could escape one's fate by throwing oneself off the bridge is mocked as unrealistic. When one character, fearing the end of her romance with a soldier on injury leave, contemplates this course of action, another replies, "Oh—the river! That's the remedy for all things, ain't it? You little fool! You think everything will be settled if 'e goes back into the war and you into the Thames. Never in my life did I ever 'ear of such stupidity" (132-33). In the end, the romantic hero, not wishing to be torn from his lover's side by being sent back to the front, exclaims to her, "They can have their number back, because I won't be using it from now on. I love you, sweetheart. Do you hear that? Do you understand what that means? My life is yours, not theirs." Her reply? Simply that "You can't get out that way, Roy" (165). The only bridge out of the bleak existence of wartime England in this play is that which crosses over to nowhere: as the playwright puts it in an introduction, in the era he wished to capture, "something tremendous had gone out of London, and that something was the insular complacency, the all-conquering pride, which had made Britain universally great and, at the same time, universally unpopular" (xi). Sherwood's bridge promises meaningful transition, in other words, but only from a comfortable state of enclosure to a corrosive, frightening exteriority.

Finally, in *Dubliners*, James Joyce's bridges seem to offer their users the possibility of escape, but do little to help one transcend the oppressive limits of city life other than allowing for fleeting moments of exile. In "A Little Cloud," for instance, Little Chandler goes to meet an acquaintance who has spent time in Paris. The experience lends a touch of the cosmopolitan to his humdrum existence, and as he walks, "For the first time in his life he felt himself superior to the people he passed. For the first time his soul revolted against the dull inelegance of Capel Street." He, too, he thinks, will leave: "There was no doubt about it: if you wanted to succeed you had to go away. As he crossed Grattan bridge he looked down the river towards the lower quays and pitied the poor stunted houses" (73). Yet when this character gets to the land on the other side and meets his acquaintance, the man turns out to be no more worldly or sophisticated than before; in the end, the experience as a whole lends Little Chandler not escape, but only an intensified feeling of isolation and internal exile. At the story's conclusion, he is unable to comfort his crying child; as his wife appears and provides solace to the infant, he himself begins to break out in tears. Again, as for Sherwood, the only transformation that Joyce's bridge can offer is that which destabilizes the user's sense of settled domesticity.

For all these writers, bridges in England and Ireland seem to hold out little hope to those crossing them unless that crossing can be arrested. As we've already seem, for writers in the U.S. and elsewhere, however, bridges are interesting not as machines for stopping time or forgetting but for telling. Along these lines, perhaps the most comprehensive and fully realized fictional portrait of one bridge through all the various stages of its existence is Ivo Andrić's *The Bridge on the Drina*. Originally written in 1941 and published in 1945, it was translated into English in 1959, two years before Andrić won the Nobel Prize for literature mainly on the strength of its achievement. Andrić's translator Lovett F. Edwards harbours doubts in his preface that the book could even be classed as a novel, as "Its scope is too vast, its characters too numerous, its period of action too long" (Andrić 8). An introduction to the same volume by William H. McNeil concurs, suggesting that if the book is indeed an epic, it is "an epic without a hero." The only entity resembling a "main character" is the bridge itself, and for McNeil the bridge is not a hero, but instead "a symbol of the establishment and the overthrow of a civilization [the Ottoman Empire] that came forcibly to the Balkans in the fourteenth to sixteenth centuries and was no less forcibly overthrown in the nineteenth and twentieth centuries" (1). Sascha Talmor, on the other hand, contends that prominent built spaces, in the hands of accomplished modernist authors like Andrić, "are the central images, symbols and characters of the story. It is in and around them that the drama or main action takes place, it is in relation to them that the human characters are portrayed" as they go about the travails of life (250)[1]. As such, these spaces function enough like characters that the book can indeed be classed a novel.

While the bridge on the Drina very much serves as the main character of Andrić's novel, however, it does so not necessarily by acting symbolically, but more fundamentally by merely *acting*, both as means of conveyance and of evaluation. On the very first page, the author addresses what will become the novel's central problem, the sheer depth of the often troubled relationships among the bridge, the locals, and the empires who variously possess it over three centuries. These political regimes, for their part, alternately celebrate and despoil it with petty and violent actions which undercut its designed function. Near the outset, Andrić writes that

> the bridge, uniting the two parts of the Sarajevo road, linked the town with its surrounding villages. Actually, to say 'linked' was just as true as to say that the sun rises in the morning so that men may see around them and finish their daily tasks, and sets in the evening that they may be able to sleep and rest from the

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[1] G.R. Taneja likewise argues that Andrić's bridge fills an important symbolic function realized through time: "a strand of Moslem thought present in the novel suggests that the bridge stands for man's creativity which achieves something lasting and good." For Taneja, one of Andrić's major messages is thus that "The absence of such men who nourish human creativity would mean that God no longer existed" (212).

labours of the day. (13-4)

The bridge does not merely serve the town in a purely functional capacity to facilitate commerce, in other words: it pervades every aspect of its cultural and political fabric. The town of Višegrad's people are proud of it, for they recognize it as a "rare structure of unique beauty, such as many richer and busier towns do not possess ('There are only two others such as this in the whole Empire,' they used to say in olden times)." As the "one real and permanent crossing in the whole middle and upper course of the Drina" on a geopolitically important route, it confers important status on the town itself; Višegrad at its best is a truly cosmopolitan, multi-ethnic community, in the way of "the settlements which always and inevitably grow up around an important centre of communications and on either side of great and important bridges" (14).

At its first appearance, the bridge's achievement is measured on a distinctly human, not spiritual, register. We find that it "was about two hundred and fifty paces long and about ten paces wide save in the middle where it widened out into two completely equal terraces placed symmetrically on either side of the roadway and making it twice its normal width." One of these terraces, the *sofa*, has benches and is a gathering place for people to drink coffee and socialize. The other, the *kapia*, has no benches, but "a plaque of white marble with a rich Turkish inscription, a *tarih*, with a carved chronogram which told in thirteen verses the name of the man who built the bridge and the year in which it was built" (15). It has been built on the order of a high administrator in the Ottoman regime, stolen as a child from his parents in blood tribute to the empire. Having achieved power, he grants the bridge to the town as a gift to the place where he grew up. Earlier, while being carried away as a child from his homeland to the metropole, he is brought across the Drina on a ferry at the site of the future bridge. There, he feels a pain in his chest, "which was always associated with the memory of that place where the road broke off, where desolation and despair were extinguished and remained on the stony banks of the river, across which the passage was so difficult, so expensive and so unsafe" (25). Later, having attained the heights of power, he has moments where he recalls this pain, and "In one of those moments he thought that he might be able to free himself from this discomfort if he could do away with that ferry on the distant Drina." Thus it is that he is the first to see, "in a single moment behind closed eyelids, . . . the firm graceful silhouette of the great stone bridge which was to be built there" (26); once more, the bridge must be fully formed as an idea in its creator's mind before it can be realized in stone.

As we have seen before, in virtually every instance of a bridge of cosmopolitan technology's being built in a hinterland, the body of a local must be sacrificed to the bridge in order that a language of passage may be inaugurated in the community's culture of spatial practice. In Andrić's telling, likewise, a peasant who has opposed the cruel practices of a corrupt construction superintendent by surreptitiously damaging the structure at night is captured, tortured, and impaled on a stake over the bridge as a warning to all who would foment rebellion. As his body is raised, it undergoes a transubstantiation, so that it "no longer seemed to bear any likeness to a human body which grows and then rots away, but seemed to be raised on high, hard and imperishable as a statue which would remain there forever" (55). After news of this man's torture and death reaches the distant seat of empire, the cruel superintendent is removed from his position and the bridge is happily completed to the benefit of the townspeople. When it opens, they are transfixed, repeatedly crossing the span from one side to the other, all "watching from every point the new views open to them from the bridge." In performing this movement, each feels that "besides the well-known elements of earth, water and sky, one more were open to him, as if by beneficent effort each one of them could suddenly realize one of his dearest desires, that ancient dream of man—to go over the water and to be master of space" (66). The bridge thus fulfills a deeply human desire for passage, yet in doing so exceeds the mind and scale of the human. "It too grew old, naturally," writes Andrić, "but on a scale of time that was much greater not only than the span of human existence but also than the passing of a whole series of generations, so that its ageing could not be seen by human eye" (71). The great promise of the bridge, that of permanent freedom, is only ever truly achieved in this novel when the bridge is permitted to exceed the concrete exigencies of pragmatic function and exist on a different, more metaphysical, plane.

The problem becomes that over the bridge's generations of service, the great forces of history are physically manifested on the bridge as violence, scheming, and military prohibitions. All of these occurrences reassert the tragedy of fleshly weakness instead of permitting people the sense of freedom from earthbound limitations those present at its opening were able to experience. Early in its history the bridge is flooded over, and for once is inaccessible to the checkpoints, flags, and pikes of the powerful. All the townspeople are joined in evacuation efforts, so that "the force of the elements and the weight of common misfortune brought all these men together and bridged, at least for this one evening, the gulf that divided one faith from the other" (77). Rising the next morning, the spatial functioning of their community is transformed, for the people see, for the first time since its construction generations earlier, "their town without a bridge. The waters had risen a good thirty feet, so that the wide high arches were covered and the waters flowed over the roadway of the bridge which was hidden beneath them" (80).[2] The event soon passes into legend, however, and in the very next chapter a blockhouse is erected in the middle of the span where purported insurgents are publicly beheaded and their heads impaled on stakes.

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[2] For the critic Tomislav Z. Longinović, this moment underlies the book's political orientation as a whole: "The common memory of misfortune that binds men together is presented as the model of collective identity upon which Andrić imagines his version of Yugoslavism" (151).

This, too, however, the bridge is eventually able to overcome: after the blockhouse is removed, "the generations renewed themselves beside the bridge and the bridge shook from itself, like dust, all the traces which transient human events had left on it and remained, when all was over, unchanged and unchangeable" (93). The magic of the bridge, it becomes clear, is its power to be redeemed after being repeatedly defiled by human history. In using it, its characters do not so much simply cross from bank to bank as transcend the temporal realm of the human. Tellingly, once the original moment of the bridge's construction has passed and the community has long ago established standards of narrative practice for crossing it, those stories which accrete to it in community discourse are those in which people transcend the physical and achieve the mythical. One young woman jumps off the bridge in order to avoid an arranged marriage to a man she dislikes, and in doing so passes from the corporeal into the legendary: "For some time the townspeople talked about the incident and then began to forget it. All that remained was a song about a girl whose beauty and wisdom shone above the world as if it were immortal" (112). Later on, a drunken, failed man accepts a barroom dare to walk the bridge's icy railings. In the eyes of passing children, this man "so well known to them" is transformed into legend who, "transfigured and light, dancing daringly and joyously as if transported by magic, walked where it was forbidden to walk and where no one ever dared to go" (199). Over time, then, the bridge begins not to connect physical places, so much as to connect different times, cultural traditions, and imaginative realms.

Seen in this light, the recurring disillusionment occurring throughout the novel at points where the structure is re-appropriated into new administrative regimes is the disheartening sadness over a technocratic insistence that the bridge's pragmatic physical functions be recognized as its main assets. The critic Zoran Milutinović finds that the latter part of *The Bridge on the Drina* dramatizes the triumph of "structural" things, like the trains which are not, like the bridge, "specified by its substantiality" but "by their place in the system to which they belong" (95). However, I must disagree; if anything, technocracy, Andrić suggests, relegates the built world to the state of vulgarity, making its substantiality not into a spent force but a totalizing one. While workers from the Austrian empire are repairing the bridge in the late nineteenth century, the town's children are severely disappointed when the men decide to clean out the bird droppings in a hollow in the central pier "in which by universal childish belief the Arab lived" (209). These children even tarry on their way to school, "waiting vainly for hours for the black man to emerge from his darkness and strike the first workman in his path, strike him so strongly that he would fly from his moving scaffolding in a great curve into the river" (209). Needless to say, this glorious rebuke to the metropole does not occur. Due to this technocracy's practical impulses, legend is quite literally reduced to excrement and discarded.

It is these pragmatic forces which eventually result in the bridge's ultimate betrayal. Even as the engineers retrofit the structure, a young generation of townspeople (pointedly, the author's own) is able to conceive of a whole new realm of hope, for "Life stood before them as an object, as a field of action for their liberated senses, for their intellectual curiosity and their sentimental exploits, which knew no limits." Although their dreams are expressed in spatial terms, as spatial practice, these terms are only the least grounded and most nebulous:

> All roads were open to them, onward to infinity; on most of those roads they would never even set foot, but none the less the intoxicating lust for life lay in the fact that they could (in theory at least) be free to choose which they would and dare to cross from one to the other. (233)

Even as they discuss these vague possibilities with great philosophical commitment, though, the winds of World War I are beginning to blow. In the novel's closing movement, the bridge is mined and bombarded by artillery shells. As this destruction unfolds, a local Serbian man is held hostage and told that he will be killed if the bridge is damaged. Sitting under guard, "responsible with his life for something that in no way depended on him; for the fate of that bridge" (303), he feels that "the bridge over which he had crossed thousands of times but had never really looked at, now lay with all of its weight on his shoulders like some inexplicable and fateful burden" (305). Ironically, the bridge which has supported and shaped its immediate community as a whole has come to depend on one faction's valuation of a particular person's worth. We never get to hear of this man's fate, but when the bridge's central span is finally destroyed, another local man, a shopkeeper with a weak heart, shocked that the warring armies "had begun to attack even the strongest and most lasting of things, to take things away even from God" (313), attempts to flee on the road leading uphill away from the bridge. However, he cannot maintain "that fine balance between his breathing and his heartbeats" (314) and dies. As the bridge goes, so goes the life of its town; its collapse presages both the physical death of one of its prominent citizens and the values of grace, dignity, and cross-cultural détente themselves.

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For Andrić, a bridge is betrayed, in other words, by those who fail to read the message of its passage as one of unity and hope. Moreover, in spatial terms, this betrayal is enacted as hindrance to those who would cross and be transfigured in their passage. The possibility of betrayal, as such, only exists to the extent that a bridge speaks a language to those who would cross it, yet one which, when read in different ways, appears to say very different things. American authors of fiction, whose subject is so often the self-defining human being travelling freely through space,[3] are particularly sensitive to the opaque yet enticing language which engineered means of passage offer the traveller—and to the ultimate inability for this promise ever to become fully legible. In *On the Road* (1957), for instance, Jack Kerouac's Sal Paradise, setting out on this same road Whitman had striven to make open, senses ecstatically that "Somewhere along the line . . . there'd be girls, visions, everything; somewhere along the line the pearl would be handed to me" (11). On a bus in Arizona, he says he "had a book with me I stole from a Hollywood stall, *'Le Grand Meaulnes'* by Alain-Fournier, but I preferred reading the American landscape as we went along. Every bump, rise, and stretch in it mystified my longing" (102). James Baldwin, in *Another Country* (1961), calls the George Washington Bridge a "distant bridge which glowed like something written in the sky" (11). More recently, the South-Asian émigré Vikram Seth's *Golden Gate* (1986), a novel-in-verse comprising six hundred and ninety sonnets, extols the Golden Gate Bridge as poem: "Nestling the fort, in unornate / Magnificence across the acres / Of whitecapped sea, the golden span / Hangs for the world to hymn and scan" (208). These moments echo Barthes' contention that the Eiffel Tower "is a Gateway [which] marks the transition to a knowledge" (14), not to mention Trachtenberg's similar comment that the Brooklyn Bridge's towers "literally . . . are gateways; but they are also icons, bearing the motif of a gateway. The theme they announce is that to pass through them is something more than to pass through an ordinary doorway" (*Brooklyn Bridge* 84-85). While the language these built spaces speak is difficult to decipher,[4] it is nonetheless

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[3] In a classic example, Walt Whitman writes in "Song of the Open Road,"

> From this hour I ordain myself loos'd of limits and imaginary
> lines,
> Going where I list, my own master total and absolute,
> Listening to others, considering well what they say,
> Pausing, searching, receiving, contemplating,
> Gently, but with undeniable will, divesting myself of the holds
> that would hold me.
> I inhale great draughts of space,
> The east and the west are mine, and the north and the south are
> mine. (120-1).

D.H. Lawrence's famous assessment in *Studies in Classic American Literature* (1924) was that "Whitman's essential message was the Open Road. The leaving of the soul free unto herself, the leaving of his fate to her and to the loom of the open road. Which is the bravest doctrine man has ever proposed to himself" (165).

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[4] The engineer Frederick Gottemoeller (1998), however, finds the messages spoken by various bridges much more coherent. His book on bridge engineering aesthetics begins with the statement, "Bridges speak to us" (1). He goes on:

> They speak to us about the places they are or the places they take us. They speak to us about travel: the new wonders to be seen, the money to be made, the time saved, the excitement of the crossing. They speak to us about the skill of their designers and the courage of their builders. Above all, they speak to us about the values and aspirations of the communities, organizations, and persons who build them. (1)

For Gottemoeller, such messages are so abundantly clear that he can perceive them, with full confidence, as statements of their builders. For the Romans, for example, he perceives bridges to speak the words "'I, the Emperor Trajan, by the power of Rome, have built this massive bridge; realize the impossibility of revolt'" (3). In the case of the Pontist Friars, the message relayed is supposedly "'We, Les Freres du Pont, by the grace of our Lord, have built this bridge for you; join us in our pilgrimages to His holy always a language of transformation and redemption.[5]

Likewise, the Brooklyn Bridge began to be seen as a message written in some obscure dialect almost as soon as it was completed, yet the perceived message changed as the bridge aged. In a prominent essay published in *Harper's Weekly* magazine to celebrate the Bridge's opening in

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shrines'" (3). In comparison, Gottemoeller relates disapprovingly, modern bridges in the United States do not make such distinct statements, but only "convey a message of apathy and mediocrity" (4). Could it be, however, that the reason these earlier bridges speak so coherently compared to current ones is that Gottemoeller is considering them not as active, functioning means of passage but as inert objects, reified by the historical timeline we saw being constructed in Chapter II? In other words, does the lack of coherence Gottemoeller identifies arise out of our tendency to use them, instead of contemplating them from a point of removal? (To be fair, Gottemoeller devotes considerable attention in later chapters of his book to evaluating how to make the experience of bridges aesthetically pleasing not from a fixed point of view, but at sixty miles an hour [41-44]).

[5] Comparatively, in F.R. Scott's Canadian poem "Laurentian Shield" (1954), landscape again speaks an inchoate language, but the urge to decipher it is a less mystical, more moral call to duty. Scott writes,

> Hidden in wonder and snow, or sudden with summer,
> This land stares at the sun in a huge silence
> Endlessly repeating something we cannot hear.
> Inarticulate, arctic,
> Not written on by history, empty as paper,
> It leans away from the world with songs in its lakes
> Older than love, and lost in the miles.

Although technology begins to render this language coherent, "Slowly forming, with steel syntax, / The long sentence of its exploitation," the fullest realization of its message will only come about due to the hard work of the common people, "From millions whose hands can turn this rock into children" (284-85). For Scott, then, there is mysticism in the image of barren rock transfigured into children, but underlying it is a sense of responsibility: only by blue-collar civic-minded contribution can we make civilize our landscape, not by the inflated intellectual pronouncements of writers of fiction alone.

1883, Montgomery Schuyler criticized this span's design for its "woeful lack of expression." Such a structure, argued Schuyler, should immediately express the interplay of forces running through its mechanical components, and so "The piers should assert themselves starkly and unmistakably as the bones of the structure." Instead, they seemed reticent to explain themselves. On the other hand, Schuyler did like the suspended steel parts, as, he wrote, "What monument of any architecture can speak its story more clearly and more forcibly than this gossamer architecture"?

Thirty years after the Brooklyn Bridge was completed, however, authors began to ask whether it could speak of more than its own structural integrity. In the novel *The Unwelcome Man* (1917) by Crane's friend Waldo Frank, the main character Quincy, a weak and mostly unwanted youngest child, persistently feels a "deep, yet inchoate want upon his soul" (44). As he encounters the Bridge during a day trip to New York, he is offered a moment of terrifying clarity. Taking to the walkway, he suddenly feels the Bridge's immense power: "It must know the city's soul since it was so close to the city's breath. In its throbbing cables there must be a message. In its lacings and filigrees of steel, there must be subtle words!" (169). These words challenge him to accept the fundamentally flawed yet majestic cacophony of urban life. "Quincy was puzzled," we find, for "He did not know that in this flaunting grandeur, building from myriad misery and ugliness, lay the nature of New York" (169). He leaves the bridge, and looking back up at it, now finds it a reproach: "it seemed an unattainable pathway. His nerves told him he would be better looking down at Brooklyn" (171). Not being able to accept the challenging message he has been sent, he goes on in life as a lonely, dejected (and rather dyspeptically unappealing) person.

Others using and writing about the Brooklyn Bridge were beginning to glimpse its transcendent possibilities at about the same time. Lewis Mumford, writing later in life in 1975, remembers one particular early-spring crossing of the Brooklyn Bridge into Manhattan during his youth in which the sun broke through the clouds just as he reached the middle of the span. In that moment, he writes, "there was I, breasting the March wind, drinking in the city and the sky, both vast, yet both contained in me, transmitting through me the great mysterious will that had made them and the promise of the new day that was still to come." He was, he writes, forever changed: "all the confusions of adolescence dropped from me, and I trod the narrow, resilient boards of the footway with a new confidence that came, not from my isolated self alone, but from the collective energies I had confronted and risen to" (37). Trachtenberg characterizes moments like this as ones common to several writers and artists; in them, "Mere walking ceases, and crossing begins: the bridge sweeps the body into the modulated measures of an upward passage, and sweeps the eye into new harmonies of motion and sound" ("Cultural Revisions" 61). In Mumford's version, such a moment also proves unrepeatable, as "the wonder of it was like the wonder of an orgasm in the body of one's beloved, as if one's whole life had led up to that moment and had swiftly culminated there" (37); along with "two or three other similar moments," this very experience led Mumford to spend his lifetime as a student of cities.

In the late 1920s, Hart Crane contacted Mumford for information about the Roeblings. Both Crane and Mumford, in Mumford's own estimation, sensed that the city, and the bridge itself, possessed mythological powers: as he somewhat immodestly holds, "Thousands of people must have felt the same as we in our different ways had felt, ever since the Bridge was opened; but no one had freshly expressed it until the twenties" (35). This opinion would seem more than a little presumptuous, but there is, I think, something to it nonetheless. Such feelings result from the pursuit of what I have previously termed *spatial literacy*. This literacy does not only exist in books: it is a matter of how narratives are constructed and then continually reformulated to make passage through space readable. As it was, Mumford was inspired at the time to write his own play, *The Builders of the Bridge*, about passage over the Brooklyn Bridge in 1927. Although unpublished until 1975, the play intriguingly in its own small way contributes to the development of the narrative practice of the Brooklyn Bridge, from physical link between landmasses to metaphysical passageway to transcendence. In this play, the challenge to bridgebuilder Jefferson Baumgarten (read: Washington Roebling) is, as he sees it, to "do something real" (224). Yet

Baumgarten additionally realizes that as an achievement his bridge has a somewhat divine meaning: "A bridge is a glimpse of perfection. You and I and Tom, Dick, and Harry are a succession of lapses, failures, and mistakes. Aren't we now? If there's going to be any kingdom of heaven on earth, it will be through bridges and not through us" (244). He will produce a structure so perfect that its one function will be to edify its users.

So far so good as far as the goal of universality, but in perhaps the play's most engrossing scene (one which Mumford later acknowledged would probably prove to be unworkable for the legitimate stage, but might be successfully produced for film or television), the builders and their friends and family gather around a spyglass to view the uncompleted bridge from the Baumgartens' house, and, the stage direction has it, "the bay window is replaced by a subjective screen whose images reflect the personality that views it" (266). For some characters, it is a strategically important link between landmasses during times of war; for others, a place where lovestruck young men fling themselves off in heartbreak at having been rejected by women; for a young woman in love with Jefferson, it is his own body, suspended between the two piers. Conceptually, this device is highly reminiscent of a passage in T.S. Eliot's "Prufrock," published twelve years before Mumford wrote his play. At one point in Eliot's poem, Prufrock expresses his frustration that he cannot find words to express his feelings:

> But as if a magic lantern threw the nerves in patterns on a

> screen:
> Would it have been worth while
> If one, settling a pillow or throwing off a shawl,
> And turning toward the window, should say:
> 'That is not it at all,
> That is not what I meant, at all.' (5.105-110)

Whether or not Mumford was directly referencing this passage here, the intellectual correspondence between these images is telling. A feeling runs through the built landscape, both writers are saying, which cannot be accounted for in pre-existing modes of literary representation; in fact, it cannot be accounted for by any shared system of representation, for each person will respond to this disquieting *geist* idiosyncratically.

Mumford, however, by displaying some of these views to his audience implies that the plurality of this range of responses is inherently interesting and vibrant; Eliot merely wonders what's the point, given that such plurality, reflecting such total disconnection between consciousnesses, fundamentally precludes most meaningful communication. As such, for all Baumgarten's desire that his bridge be solid, real, and coherent (even while transcending the human scale), it inevitably transforms into different things for different people to an extent which greatly troubles him. *The Builders of the Bridge*'s closing words, spoken by Jefferson himself, introduce a distinct note of doubt about his achievement: "I am. You are. The Bridge is. I am sure of these things. (*A long brooding pause.*) Or am I?" (312).

If what some authors were feeling in the 1920s was, as Mumford had it, something new, it was the need to make readable the message transmitted by a prominent structure of dynamic passage which has accrued a increased sense of mystery partially by virtue of having stood for a few generations. Crane, too, finds the Bridge's message at once persuasive and obscure. He writes, near the outset of his poem,

> And obscure as that heaven of the Jews,
> Thy guerdon . . . Accolade thou dost bestow
> Of anonymity time cannot raise:
> Vibrant reprieve and pardon thou dost show. (2)

In using it, one is made anonymous, and thus pardoned from worldly sin, yet the means by which this happens are unclear. How does the bridge do so—how does it speak to us so movingly yet so obliquely, and why does that speech make the bridge such an appropriate poetic means for describing early-twentieth-century spiritual experience? Crane finds his answer by working through a series of journeys undertaken via machine-age transportation technologies.

Many of Crane's more sympathetic critics have agreed that the poem is unified not as a narrative but as a progression of states of consciousness. Malcolm Cowley asserts that Crane "does not proceed logically, but rather by associations of thought, by successive emotions" (99). For Bernice Slote, the poem was intentionally meant "not to be a narrative epic which would proceed in historical sequence but an evolution in which idea and motif would in recurrence construct the imaginative body of the poem as an 'organic panorama' [Crane's own words]" (22). Likewise, for Joseph J. Arpad, "lending a 'myth' to God does not readily agree with the traditional sense of *myth*, meaning a story or narrative. Yet it does correlate with the Platonic sense of myth." As Arpad has it, "since, for Plato, all insights were visions of forms or images, not words," Crane's poem functions by "approximating the 'qualitative progression' of lyric poetry" (77). According to Richard P. Sugg, "*The Bridge* is about the poetic act rather than the action of the poet as a person in the world, about the life of the imagination trying to realize its 'dream of act' by giving form, and thereby meaning, to itself" (3).[6] Hence, Crane "redeems the possibilities of the future" by "demonstrating through his own example that the human imagination has a life that can assimilate, unify, and grow beyond any experience of time or place," to the extent that the poem "is itself a bridge uniting past and present and leading to the future" (5). By invoking the primacy of the poetic act before the poet's engaged participation in the world, Sugg finds a high degree of organic unity throughout the poem.[7] I contend, however, that these arguments about the poem's coherence as a series of states of consciousness overlook the poem's most pressing concern: how is storytelling possible in an age of machine transportation?

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[6] Sugg revisited this argument in his essay "Origins and Originality in Hart Crane's American Epic" (1984), coming to much the same conclusion.

[7] See also Lawrence Dembo, "The Unfractioned Idiom of Hart Crane's Bridge" (*American Literature* 27.2 [May 1955]: 203-24) for another defence of the poem's conceptual unity at all points.

Some of Crane's more recent critics, however, have found *The Bridge*'s greatest strengths in its moments of incoherence and disunity. Roger Ramsey argues that "what we have been asking of *The Bridge* is catharsis, but what *The Bridge* offers is ecstasis," by which he means that the poem's "real interest" is in generating a sublime, undescribable state in which "reader, poem and poet are identified." Although, claims Ramsey, "I am no more friend to obscurity than any other modern critic," for him only this state of ecstatic interconnection truly "is attachment, not the cathartic detachment; it is transubstantiative, not consubstatiative" (280). In an argument which also centres on Crane's participation in the poetic act instead of on his engagement with the external, historical world, Lee Edelman contends in *Transmemberment of Song: Hart Crane's Anatomies of Rhetoric and Desire* (1987) that the long-standing argument over whether the poem is unified or not is a sort of red herring: the poem is not unified precisely because Crane wanted it that way. Edelman bases his argument on the critical concept of *catachresis*, defined here in a postmodern context as "the practice of adapting the nearest possible term to describe something for which no actual term exists" (10). Since the world Crane is putatively describing in *The Bridge* cannot fundamentally (yet) exist, the world of the poem itself is necessarily a world of discourse, a discourse violently opposed to the world of substance. As such a world feeds mainly on itself, "Crane finds his poems through the working of his rhetoric rather than finding his rhetoric through the working of his poems" (14).

Suzanne Clark Doeren makes a similar argument: "In order to read Crane, the critic must abandon literary theories founded in such notions of cultural continuity. The poem implies something about the reading of it: a necessary shattering of cohesiveness" (21). As such, the poem's engagements with space are politically oppositional, for *The Bridge* "takes on the appearance of opposition to the culture rather than integration, as it discloses the hidden gaps in the story and remembers the repressed discontinuity" (24). The trouble with this line of reasoning is that, like de Certeau's model of the walker in the city, it denies fiction's implication in community standards of spatial practice by making building (making readable) and using (writing) space into mutually exclusive categories. Doeren's thinking even leads her to portray Crane as trying to destroy the Brooklyn Bridge instead of using it to construct a mythology:

> If the poet can produce a Brooklyn Bridge in the text of the poem which might compete in the cultural script with the Brooklyn Bridge inscribed in the text of New York City, he may engineer a challenge to the closed history of America's ideology of progress. (22)

Significantly, in making this argument that Crane's poem is not part of engineering discourse but a competing script to it, Doeren declines to mention the well-documented facts that Crane had at one point negotiated unsuccessfully to write an official biography of the Roeblings (Arpad 78n.), that, as mentioned above, he corresponded with Lewis Mumford while pursuing this project, that he wrote an article on the building of the George Washington Bridge for *Fortune* magazine which was unfortunately not published (Brown 121), and that as Crane worked on the poem, he occupied the same building at 110 Washington Heights as had Washington Roebling during the construction of the Brooklyn Bridge, and, after a time, even the same room in the building from which an incapacitated Roebling observed the bridge's progress and issued directives to on-site superintendents (Crane xxvi-ii; Lewis 21). Crane, much of this evidence suggests, saw his work as at least closely related to, if not even continuing, that of these great engineers. While Doeren definitely has a point about Crane's challenging the closed history of America's ideology of progress so far as he opened up new categories of inquiry into the bridge's function, his critiques of machine-age technology come from within, not from a position of ideological and epistemological removal. In other words, his poem does not challenge the progressivist ideology obtaining to the physical bridge by replacing it with parallel structure but by adding that dangerous supplement which totally revises what it can mean and do.

In any event, Edelman's and Doeren's thinking is perhaps as far away as possible from Donald Pease's "*The Bridge:* Emotional Dynamics of an Epic of Consciousness" (1975), in which the author points out that Crane himself felt that "Whereas science provided objective categories of knowledge, poetry facilitated the subjective experience whereby those categories became alive for each man" (388). Henry Adams, after all, had noted in his famous 1907 autobiography that "the new American—the child of incalculable coal-power, chemical power, electric power, and radiating energy, as well as of new forces yet undetermined—must be a sort of God compared with any former creation of nature" (496). The challenge was on, it follows, for writers of the early twentieth century to conceive of an imaginative means to accommodate these new capabilities. For Pease, Crane's poem thus becomes necessary not to supersede the Brooklyn Bridge, but better to incorporate it into modern perception, for "as science uncovered more and more complex realms of energy, the subjective consciousness had to be cultivated in order to uphold these new discoveries. In the present age, objective knowledge had outdistanced subjective awareness and poetry was to bridge the gap" (388-89).

Other critics suggest we consider that Crane's poetry quite literally bridges gaps between difficult-to-read bridges. As Thomas A. Vogler has it, "Crane constantly referred to himself, while writing the poem, as being 'in the middle of *The Bridge*,' and at one point he noted that his poem, given its name, 'is begun from the two ends at once.'" This insight in turn leads Vogler to realize that "once the bridge is completed, what were its beginnings become its ends" (xiv). Margaret Dickie, whose essay "The Backward Flight of the Bridge" (1985) details the actual order in which the sections of *The Bridge* were written, reports that "Atlantis," the final section, was the first to be completed (79). Although Crane's personal correspondence suggests that "he seemed to despair of constructing the bridge between the real world and his image of it, of finding materials to embody his vision," *The Bridge* as Dickie sees it does betray, at all stages of its composition, "a sense of the whole poem and the experiences that would form it" (81). If anything, the perceived incoherence of the middle parts, for Dickie, occurs because "By starting his poem with the ending and then writing an opening section that essentially repeats the ending, Crane made the intervening sections, the bridge between first and last, not only unnecessary but impossible to write" (83). It is striking, however, that Crane has neatly inverted the functions of bridge and poem in *The Bridge*, even as he shows these two terms are inseparable. The Brooklyn Bridge appears at the outset and at the end, each time, as I have argued, as a cipher which speaks yet only obscurely, in a way which must be made readable. The poem between is clearly not superfluous, then, for it represents the process of deciphering this speech—this statement, precisely, becomes a bridge between bridges. The physical bridge, transmuted, becomes the poem, and vice versa: the poetic image of the bridge does not span an opening and closing section on American mythology, but the reverse. As Horace Gregory, one of the poem's original reviewers, trenchantly put it, Crane's Brooklyn Bridge "is at once a road and an intangible thoroughfare on which our memories and dreams progress forever, reaching far beyond our consciousness" (96).

In other words, in exploring transportation technologies, Crane is most interested in how some appear to be little other than machines of mundane, soul-destroying repetition along exactly the lines T.S. Eliot has already suggested, while others contain and promote experiences which, though equally repeatable, are deeply life-affirming and redemptive. At its first appearance in "Proem," the bridge is described as having "motion ever unspent in thy stride." With its gracefully suspended cables, it appears to the eye to leap forward in space; more pointedly, though, it only does so by making our eyes move, and also by offering dynamic movement to our bodies and minds. Its motion is therefore an alternative to the dumb, mechanical repetition of experience characterizing the cinema in the previous stanza: "With multitudes bent toward some flashing scene / Never disclosed, but hastened to again, / Foretold to other eyes on the same screen" (1). Immediately thereafter, Crane's bridge too, as it is being incorporated into the poet's own language, has a body fall from it as a person commits suicide, "shrill shirt ballooning." However, this sacrifice cannot for Crane inaugurate a meaningful language of crossing. As the jumper drops, the bridge itself, pointedly, witnesses the tragedy as a "speechless caravan"—that is, in the face of this violent, tragic movement, the bridge itself ceases to speak, yet advances forward in a strung-out line, a movement undertaken without reflection and leading nowhere. Moreover, the bridge is further profaned in this section by being divided up into measured times and spaces and doled out to users by traffic control devices. Crane writes,

> Again the traffic lights that skim thy swift
> Unfractioned idiom, immaculate sigh of stars,
> Beading thy path—condense eternity:
> And we have seen night lifted in thine arms. (2)

The point is underscored by the poet's mechanical technique: the bridge's wholeness is expressed in an enjambed line, while the work of the traffic lights is manifested in choppy, punctuated phases. The bridge as complete (even beyond itself) wins in the end, though, as, we are told in the phrase which begins with an "And" which as conjunction is not immediately linked to the preceding clause as much as to everything that has come thus far in the poem. The bridge can support even something so ethereal as darkness itself and in its graceful unity transform into mere jewellery those mechanical devices which would divide it into fractions.

Yet this redemption should not be mistaken for a removal from the realm of narrative into a realm of atemporal existence, of unchanging and all-encompassing wholeness. Crane needs his bridge to *function*, that is, *for its crossing to be able to mean something*. For Trachtenberg, "Among the meanings of Crane's bridge, then, is the rhetorical trope of 'bridging,' the *act* of crossing over." In this capacity, he contends, of not "thing" but "event," the Bridge "provides fusion, transcendence, healing." The effect is far-reaching, for it ultimately "transforms the here-and-now itself into a meaningful pattern of details" ("Cultural Revisions" 70-71). While I concur with Trachtenberg's recognition that Crane's bridge is an *event*, I argue that its relative "eventness," for Crane, is measured by its ability to organize the here-and-now into a larger historical narrative. As an "unfractioned idiom," the bridge maintains its integrity only under the condition of being tested in time; moreover, again and again in this poem, the bridge succeeds by being able to *activate* time into narrative when other types of machine-movement subsume it into mere repetition without progression.

Consider Columbus' story in the next section, "Ave Maria," a journey which for Crane inaugurates an American tradition of crossing over water. Underneath the explorer's boat, connection itself is in question. "[L]ocks, tendons / Crested and creeping, troughing corridors / That fall back yawning to another plunge" (5) interconnect the sea; these linkages connect all to everything and are therefore unintelligible as connections. The unmapped, undifferentiated world, in other words, is for humans a place of conceptual poverty: "Rush down the plenitude, and you shall see / Isaiah counting famine on this lee!" (7). Columbus's journey leads the poem into "Powhatan's Daughter," a section whose effect is to entangle this question of connection in both historical and mythical time. Awakening in another's dwelling by the harbour, Crane asks, "*Who is the woman with us in the dawn? . . . whose is the flesh our feet have moved upon*" (12)? With this question begins the poet's quest to reach back in history and enter into mythical communion with Pocahontas. To get there, he sets out on a journey, first on the highways, then on the railway, and finally on the Mississippi River.

First, in "Van Winkle," the highway: "Macadam, gun-grey as the tunny's belt, / Leaps from Far Rockaway to Golden Gate: / Listen! the miles a hurdy-gurdy grinds— / Down gold arpeggios mile on mile unwinds" (13). That this mode of transit is unfulfilling is suggested by the next couplet, in which "Times earlier, when you hurried off to school, / —It is the same hour though a later day—" (13). As the interjection gently suggests, roads can be travelled again and again by the same person, and by other people as well, without the experience necessarily changing that much or differing in its significance. No wonder, then, that "Rip forgot the office hours," while in the margin, the mysterious woman flickers in the ether: *"Like Memory, she is time's truant, shall take you by the hand"* (13). Only those who have slept and preserved their memories of a former state of consciousness may perceive her (even if dimly), while those travelling the modern highways do not have a language of time's accretion through which she may be reached.

In "The River," the poet leaves the highway and follows the railroad ties with a group of dispossessed hoboes. Existing outside of the non-time of machine-age means of interconnection, these men perceive a slower, more seasonally-attuned temporality:

> The last bear, shot drinking in the Dakotas
> Loped under wires that span the mountain stream.
> Keen instruments, strung to a vast precision
> Bind town to town and dream to ticking dream.
> But some men take their liquor slow—and count
> —Though they'll confess no rosary nor clue—
> The river's minute by the far brook's year. (17)

This image, I stress, is no facile opposition of those precious souls who live by the cycles of nature to the benighted, sensation-blunted city dwellers. Instead, these men themselves live by the mechanical logic of the railroad, taken to its fullest extension. The key to their dignity is that they have established a spatial practice for doing so without being alienated from time, paradoxically by embracing the logic of the system of rail lines as a life in and of itself rather than a mere location of convenience which one inhabits only as a place of non-belonging. These men, Crane writes, "touch something like a key perhaps," for they know the land like "a body under the wide rain," as "dotting immensity / They lurk across her, knowing her yonder breast / Snow-silvered, sumac-stained or smoky blue" (18). By being ever in transit, these men are perhaps more at home than most of their generation.

And yet . . . the poem does not end with this notion of internal exile as the truest form of belonging, for this strategy presents a typically American problem. Living this way, these hoboes finally submit to a life of endless reiteration, which itself threatens to resolve into exactly the life of mind-numbing, repetitive spatial practice Crane has set out to overcome. For him, the best trope available to discuss these matters is the frontier, the traditional means by which Americans exceed the commonplace and find new ways both to expand and at once to justify said expansion to those who end up being pushed aside and exploited, not only economically but intellectually, morally, and spiritually as well.[8] "The River" flows sadly, as the racial violence of the railroad police disrupts the wanderers' peripatetic meanderings. These authority figures—"Sheriff, Brakeman and Authority"—prevent progress itself, for their cruelty can only "feed the River timelessly." As such, the "floating niggers" drifting along add a dimension of history to the Mississippi, but less in the sense of history as a series of discrete events than as a constant state of injustice. Thus, the world continues in its unjust ways:

> Down, down—born pioneers in time's despite,
> Grimed tributaries to an ancient flow—
> They win no frontier by their wayward plight,
> But drift in stillness, as from Jordan's brow. (20)

In the end, having served conveniently to dispose of the victims of racist commerce, the River's redemption is only partial: it cannot reverse history or right its wrongs, but can at best, as have the wandering hobos themselves, just keep on moving: "Tortured with history, its one will—flow! / —The Passion spreads in wide tongues, choked and slow, / Meeting the Gulf, hosannas silently below" (21). The river can provide religious absolution, but cannot challenge historical injustice: while racist violence continues, it patiently continues quietly to dispose of the bodies, offering the victims no redress or even voice but only the somewhat hollow consolation of a dignified final procession into the sea.

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[8] See Chapter I for a discussion of the frontier mythology in the era of *The Bridge*'s composition during the first half of the twentieth century.

Two more permutations of the frontier soon appear. The poet's sought-after mythical union with Pocahontas takes place in "The Dance" (22-26), but is immediately undone by the events of "Indiana," in which the mother of a failed pioneer family of 1859, returning eastward on a wagon trail, sees a First Nations woman by the side of the trail carrying a baby on her back. The two women do experience a brief moment of communication when the pioneer mother holds up her own child to the aboriginal woman, knowing "that mere words could not have brought us nearer" (28). The woman smiles, but this moment of understanding is a briefer, sadder, and more limited one than that of the previous section. Again, no frontier is necessarily "won" in every movement and migration of Americans—that is, no epiphany is necessarily experienced in transit—for some gaps, especially those produced by historical political injustices, cannot be crossed.

Then, in "Cutty Sark," we encounter a former sailor who, in sailing the endless seas, has lost all sense of time itself (as he himself says, "'No / I don't want to know what time it is—that / damned white Arctic killed my time . . .'" [34]). The poet, considering him, detects that the man, being unable to organize his experience in any kind of organized unfolding, is a jumble of conflicting frontiers, none of which may coherently be crossed:

> I saw the frontiers gleaming of his mind;
> or are there frontiers—running sands sometimes
> running sands—somewhere—sands running . . .
> Or they may start some white machine that sings. (34)

In this quatrain, the first line proceeds forcefully as a definite assertion, but as soon as the idea is broached that the frontier is multiple and therefore not coherent, the language loses its sense of direction. The indefinite "running sands sometimes" do not express a discrete idea or emotion but merely spill over into the next line, drifting lazily back and forth. As muses, these sands cannot sing of such human things as rage or love, but can only inspire an impersonal, colourless machine to sing; what *is* sung, moreover, apparently cannot be even represented within this poem. The drunken man leaves the poet sitting in the bar, reflecting on how the promise of development which is the metaphor of the frontier is denied by the forces of chaos. But redemption is once more at hand, for just at the moment when all transcendence seems unattainable and it appears that we are all locked into a repetitive quotidian existence devoid of any sense of meaningful progression, the poet finds a means of organization: "I started walking home across the Bridge . . ." (35). The bridge makes time itself possible, for it at once proposes definite direction and yet denies any temporal and spatial boundaries between past, present, and future.

One more problem remains at this point. Although the poet has intimated that the Bridge offers him salvation by allowing him to experience time meaningfully, as non-repetitive, coherent connection to other people, he cannot quite fully articulate the experience without acknowledging his voice's location within an ongoing dialogue of spatial storytelling about the bridge's immediate surroundings. What follows in "Cape Hatteras," then, is his language's imbrication with that of the East River's great poet, Walt Whitman. This time, the problems of the previous sections are revisited through meditation on yet another transportation technology in action. Here, it is the aeroplane which fractures space into meaningless anarchy instead of defining it in a way which allows the person moving through it to exceed the boundaries of endless reiteration. The problem, Crane makes explicit, is here uniquely one of the machine age. The dynamo, he opines, is "Power's script." "Wound, bobbin-bound, refined—," it is, in language reminiscent of the absurd, energetic output of assembly-line production, "stropped to the slap of belts on booming spools, spurred / Into the bulging bouillon, harnessed jelly of the stars. / Towards what?" (41). Arising from this tumult, the aeroplane "Hast splintered space!" (43)—and crashes.

The aeroplane down, Crane asks, "But who has held the heights more sure than thou, / O Walt!—Ascensions of thee hover in me now / As thou at junctions elegiac, there, of speed / With vast eternity, dost wield the rebound seed!" (44). From the dead, Whitman rises, bringing "tally, and a pact, new bound / Of living brotherhood" (45). This brotherhood is more than an empty sentiment, for it is the connection we share to others specifically through narrative spatial practice. In "Crossing Brooklyn Ferry" (1856), Whitman had celebrated the connection to others, past and present, he was able to feel while traversing via ferry the same route the Brooklyn Bridge would later span:

> On the ferry-boats the hundreds and hundreds that cross,
> returning home, are more curious to me than you
> suppose,
> And you that shall cross from shore to shore years hence are
> more to me, and more in my meditations, than you might
> suppose. (128)[9]

As Whitman had reached out to—or, one might say, forcibly seized—those who would come ("Others will enter the gates of the ferry and cross from shore to shore," he goes on here), Crane acknowledges the outstretched hand from the past. Whitman, he insists, as much as the Roeblings or anyone else, *invented* the bridge, for "it was thou who on the boldest heel / Stood up and flung the span on even wing / Of that great Bridge, our Myth, whereof I sing!" (46). At the end of "Cape Hatteras" the union between tellers of spatial stories is complete and the poet is able to proceed forward with newfound purpose, even so that the margin of each line after the second moves ahead progressively:

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[9] For Mumford, "No poet, hurtling by plane even as far as Cathay, has yet written a poem comparable to 'Crossing Brooklyn Ferry'. . . . Those wonderful long ferry rides! Alas for a later generation that cannot guess how they opened the city up, or how the change of pace and place, from swift to slow, from land to water, had a specially stimulating effect on the mind" (35).

yes, Walt,
Afoot again, and onward without halt,—
Not soon, nor suddenly,—no, never to let go
My hand
in yours,
Walt Whitman—
so— (47)

The bridge which creates an unbroken track through time, in effect making an intelligible existence out of chaos, is thus for Crane constructed by storytelling, and in turn makes further stories possible.

Arriving through "The Tunnel" back at the bridge in "Atlantis," the poet feels his eyes being inexorably led up the towers to "Pick biting way up towering looms that press / Sidelong with flight of blade on tendon blade" (74). Here, as the word *tendon* reappears, it is not disorienting as in the ocean of "Ave Maria," but enabling; as "tendon blades," the bridge's cables are at once both means of connection and of separation. By both cutting up meaningless chaos into organized sections and then joining them together, they connect its fragments into a redemptive progression and thus allow time to proceed meaningfully. These tendon blades join "Tomorrows into yesteryear—and link / What cipher-script of time no traveller reads / But who, through smoking pyres of love and death, / Searches the timeless laugh of mystic spheres" (74). Crane's bridge, in other words, being made readable as transcendent passage through an ongoing discourse, offers a route to a mythic spiritual understanding of American space. Being, "river-throated," it speaks as the voice of river and sea. In its singing, though, it does not articulate simply words, but means of organizing our experience of space and into a myth:

> —O Choir, translating time
> Into what multitudinous Verb the suns
> And synergy of waters ever fuse, recast
> In myriad syllables,—Psalm of Cathay!
> O Love, thy white, pervasive Paradigm . . . ! (75)

Love, a concept difficult to represent, here turns out to be knowable to the extent that people establish means of connection with each other which do not resolve into an imprisoning reified network, but a matrix whose boundaries are only to be exceeded.

* * *

After the era in which Crane had made newly readable the Brooklyn Bridge's capacity for mythical, spiritual transformation of its users, the Bridge gradually took on different roles in spatial practice, a difference manifested in literary fiction and non-fiction alike. In the hands of David B. Steinman, as we have seen, the building of each great bridge became the site of its designer's fall from received modes of thinking into individual awareness, allowing the builder to join a mythical brotherhood of great engineers. In those of Alfred Kazin, however, it becomes the location where the individual user is interpellated into a community—one comprising both present and past—from which he has previously been excluded due to society's ethnic divisions.

Kazin's *A Walker in the City* (1951) is a memoir of the author's childhood and his intellectual and moral coming-of-age in the Jewish district of Rockaway, New York. As its title suggests, the text is structured around a series of walks, starting in his own neighbourhood where the culture of street commerce is markedly inviting. He recalls the women on the street, while selling merchandise, calling out to passers-by,

> *Oh you lovelies! Oh you good ones! Oh you pretty ones! See how cheap and good! Just come over! Just Taste! Just a little look! What will it cost you to taste? How can you walk without looking? How can you resist us? Oh! Oh! Come Over! Devour us! Storm us! Tear us apart!* (31; emphasis original)

Thus, although the home—especially the kitchen—is the warm and accommodating locus of his family's life, the streets of his boyhood are also enticing, even seducing.

As a young Jewish boy, Kazin both feels a proud sense of ownership and investment in the entire country of America from sea to sea, and yet also an intimation of being somewhat of an outsider. Reflecting on his family and neighbours, he writes that "We were of the city, but somehow not in it" (11). Kazin's feeling of alienation is never more vividly captured than in his various engagements with the built world though which he moves. Near the outset, he tells us that "Whenever I went off on my favorite walk to Highland Park in the 'American' district to the north, on the border of Queens, and climbed the hill to the old reservoir from which I could look straight across to the skyscrapers of Manhattan, I saw New York as a foreign city" (11). Such foreignness can be reconciled, he comes to understand, through developments in his consciousness which come about as a result of simultaneous engagements with the built world and the historical and imaginative realms of printed narratives. At first, he is troubled that "I could speak in the fullness of my own voice only when I was alone on the streets, walking about. There was something so unnatural about it; unbearably isolated. I was not like the others!" (24). Moreover, his movements do not immediately transcend this alienation, for he realizes that "Jews were Jews; Gentiles were Gentiles. The line between them had been drawn for all time. What had my private walks into the city to do with anything?" (99).

Yet it is precisely through this central motif of walking as a path to memory and connection that leads Kazin to the reconciliation he seeks. Pointedly, many of his most memorable walks take him to the public library, in which "The automatic part of my reading was history . . . where, I thought, I would find my way to that fork in the road where all American lives cross" (171). The reading he does there helps to recontextualize his walks and locate him in a history of spatial practice. "And now I go over the whole route. Brownsville is that road which every other road in my life has had to cross" (8), he reports, suggesting that each walk (and its written record, if extant) represents the author's entry into history. It becomes clear later on that such connection is not only personal, but public as well. At one point, Kazin reports that "I had made a discovery; I had stumbled on a connection between myself and the shape and colour of time in the streets of New York . . . I had made a discovery: walking could take me back into the America of the nineteenth century" (170). Democracy and egalitarianism, he strongly implies, are made possible for all only through a process of *abstraction*; such perception is developed through fiction and the writing of historical narrative in books, but works most when employed, as a language, to cathect the story of one's experience of built space over time.

The Brooklyn Bridge becomes extremely important in Kazin's development as a writer and, indeed, mature human being. As a child, he sees his father reading the *New York World*, a newspaper that for him "carried special associations for me with Brooklyn Bridge" (53). This paper's offices were near the bridge on the distant Manhattan side, and in his recollection "my father brought the outside straight into our house with each day's copy." Because the paper links the enclosed, limiting domain of the familiar with the distant sphere of the cosmopolitan, when remembering how it seemed so redolent of the other side Kazin recalls that the bridge over which it had crossed "somehow stood for freedom" (53). In standing so intangibly for "freedom" as a link between two worlds, it begins to take on an identity and presence of its own.

By linking such intangible states, that is, the bridge takes on a mysterious mythical aspect. Later on, much like Crane, Kazin writes that "whenever I humbly retired into the subway for the long ride home, something would automatically pull me out at Brooklyn Bridge for one last good walk across the promenade before I fell into the subway again" (105). That nebulous "something" coalesces for Kazin into a transcendent, indeed religious, epiphany—one not achieved in the midst of silent reflection, but amid the din of "Rush hour above, on every side, below: the iron wheels and the El trains shooting blue-white sparks against the black, black tracks . . ." (106). In an ecstatic moment of vision while crossing the bridge's walkway, Kazin relates that

> Only the electric sign of the Jewish Daily *Forward*, burning high over the tenements of the East Side, suddenly stilled the riot in my heart as I saw the cables leap up over the tower, saw those great meshed triangles leap up and up, higher and still higher—Lord my Lord, when will they cease to drive me up with them in their flight?—and then, each line singing out alone the higher it came and nearer, fly-flaming the topmost eyelets of the tower. (107)

His heart and mind are drawn above the everyday bustle into a higher state of consciousness, but that higher consciousness is, pointedly, not one of the presence of an heretofore-unseen deity suddenly appearing but of the mythical connections between people in time and space which that very urban bustle represents. In this moment, he perceives a beatific oneness to everything, coalesced in the bridge's structural features: "Somewhere below they were roasting coffee, handling spices—the odour was in the pillars, in the battered wooden planks of the promenade under my feet, in the blackness upwelling from the river" (107). However, this epiphany is not one where the bridge escapes the realm of the human, but where all the mundane human facets which make up its day-to-day existence become infused with spiritual significance. Even at the highest point of this engineered construction, in the elevated spiritual realm of the bridge's masonry towers, Kazin notices a human presence, for "A painter's scaffold dangled down one side of the tower over a spattered canvas." Here, he and everyone and every*thing* else transcend his temporal, fragmented consciousness and enter collectively into history. "Never again," he wistfully, yet ecstatically, relates, "would I walk Brooklyn Bridge without smelling that coffee, those spices, the paint on that canvas" (107).

Kazin's Brooklyn Bridge, then, does not only connect Brooklyn with Lower Manhattan but rather romantically joins the community of his past with the larger community of cosmopolitan New York. That is, it connects him and others living the alienated lives of the twentieth-century commuter and city-dweller with history. To traverse the bridge is to cross through time and connect with others on a plane of abstraction. Crucially, this kind of narrative only occurs in the context of the bridge's already having stood for over fifty years. The aspirations of the Roeblings barely enter into the fabric of Kazin's vision, for this narrative is not a journey from the mysteries of the present back to the source. Rather, he makes readable the Bridge's narrative function of suggesting a mystery not of origin, but of synchronic connection—that is, of a synchronic connection to a diachronic tapestry of experience. In crossing this bridge, in other words, he wonders not about the mind of the individual who could conceive it as an idea but about how his own crossings relate to those others who have crossed it since it was built, up to the present moment. How are *we* changed, individually and collectively, as we cross and re-cross structures built by those who have come and gone in the long-distant past?

Kazin's writing thus shows that as the twentieth century went on, the Brooklyn Bridge could increasingly function in an expanded range of registers. Its crossing, more and more, was less about itself as physical achievement and more about any number of things. In other words, Crane's bridge functions not by speaking directly but providing a new form, a new metaphor (or appropriate collection of shifting, changeable metaphors), for stories to be shaped. As the gear-and-girder age receded in the American consciousness from technological forefront to dated historical legacy, what remained in narratives such as Arthur Miller's play *A View from the Bridge* (1955) was not the fascination of the physical structures, but the pervasive metaphysical connotations of passage.

In the play, Eddie, an Italian-American, is raising his niece, gets upset when one of two relations of his wife whom he is harbouring as illegal immigrants in his house falls in love with this niece, betrays the immigrants to authorities, and is killed by one of them in a fight over honour. In many ways, though, this story is not as compelling as is Miller's introduction to it. Therein, we find that the Brooklyn Bridge and East River play interesting metaphorical roles in this plot's construction. In one way, as Myles R. Hurd reminds us, the view from the bridge is quite simply that of the Red Hook neighbourhood, seen from above. Yet Miller writes,

> What struck me first about this tale when I heard it one night in my neighborhood was how directly, with what breathtaking simplicity, it did evolve. It seemed to me, finally, that its very bareness, its absolutely unswerving path, its exposed skeleton, so to speak, was its wisdom and even its charm and must not be tampered with. (vi)

What interested the playwright, then, was not the emotional truth of any given part of the story, but the larger truth of its *trajectory*, taken as a whole: "These *qualities* of the events themselves, their texture, seemed to me more psychologically telling than a conventional investigation in width which would necessarily relax that clear, clean line of [Eddie's] catastrophe" (vi). Albert Wertheim has suggested that the bridge is less of a journey in Miller's play than a link, one stretching "from a Brooklyn of social taboos, of family and clan allegiances imported from the Old Country, to Manhattan's City Hall and courts, to a social contract in the New World regulated by codified laws and government institutions" (109). Yet the play works, I argue, not because

Eddie merely lives stretched between these two worlds, but quite specifically because the dramatic action is about his undertaking the action of moving from one to the other.

Eddie lives *by the bridge*, in terms of literal proximity, but, more profoundly, *lives by the bridge*, meaning that his life plays out according to the pattern of a person walking along a bridge.[10] For Miller, the play "must be suspenseful because one knew too well how it would come out, so that the basic feeling would be the desire to stop this man and tell him what he was really doing to his life." Once he sets out on his defined passage, the audience can see past, present, and future as an unbroken progression. "By knowing more than the hero," he suggests, "the audience would rather automatically see his life through conceptualized feelings" (vii). Moreover, like Crane, he sees this defined passage as a location of social interconnection. "Eddie is still not a man to weep over; the play does not attempt to swamp an audience in tears," he writes, "But it is more possible now to relate his actions to our own and thus to understand ourselves a little better not only as isolated psychological entities, but as we connect to our fellows and our long past together" (x).

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[10] As far as this particular pattern goes, Hurd suggests that "the bridge is linked to its representiveness in Freudian dream psychology as a symbol of the penis, and many of the psychiatrist's homosexual patients revealed that they had dreamed of traveling along or falling off these structures in their sleeping visions" (5). I note, though, how even in the midst of such phallic identification the bridge is not gazed upon, used to secrete fluids, hidden, exposed, grasped, or inserted, but either travelled upon or fallen off. Even in dreams, apparently, it is only a symbolic object to the extent that it is traversed dynamically.

Miller clearly understands that once one has embarked on the bridge over the river, one can perhaps turn back, but to go sideways is to go off the edge into nothingness. At the play's outset, Alfieri, the Italian-American lawyer, delivers a soliloquy in which he locates the action precisely: "But this is Red Hook, not Sicily. This is the slum that faces the bay on the seaward side of Brooklyn Bridge. This is the gullet of New York swallowing the tonnage of the world." This character has accommodated himself to his adopted country, calling himself, in contrast to the gangsters Al Capone and Frankie Yale, "quite civilized, quite American." In practice, this means that he has learned not to insist on moral absolutes, but has settled for a kind of inoffensive, accommodating liberalism: "Now we settle for half, and I like it better. I no longer keep a pistol in my filing cabinet" (4). As an immigrant, in other words, he has learned to get by in a world barely prepared to tolerate him by not appearing either too ambitious or too out of line with mainstream middle-class values. By the time Alfieri voices his conciliatory sentiments, moreover, Eddie's story has already unfolded: this tale will not lead to any basic reorganization of society, either to make things more dangerous or to reverse injustice. It just happens, more or less confirming the cultural—and spatial—logic which prompts it to occur, without changing the world.

"A man who rides up on a great machine," says the newly-arrived immigrant Rodolpho, "is responsible, this man exists. He will be given messages" (33). Yet the play's broader suggestion is that technology will not lead one to be spoken to directly, but will speak itself pervasively, by conditioning the very pattern of one's life. Near the end of Act 1, Alfieri, a character Wertheim suggests is the Brooklyn Bridge "anthromorphized" on stage (109), echoes Miller's statements from the introduction. He tells the audience, "I knew, I knew then and there—I could have finished the whole story that afternoon. It wasn't as though there was a mystery to unravel. I could see every step coming, step after step, like a dark figure walking down a hall toward a certain door" (61). For all of his perspicacity, he cannot halt the story's advance, and "I sat here many afternoons asking myself why, being an intelligent man, I was so powerless to stop it."

When Eddie comes in to his office later on to ask for help in ridding himself of his unwanted guests, Alfieri even tries to offer up one inevitability for another, in fact, the river (the natural flow of human events in civil society which must be accommodated) for the bridge (the passage to doom whose progress is inexorable once one has chosen to start out on). He tries to convince Eddie not to pursue the matter, saying, "I'm warning you—the law is nature. The law is only a word for what has a right to happen. When the law is wrong it's because it's unnatural, but in this case it is natural and a river will drown you if you buck it. Let her go. And bless her" (86). The river is so natural, it seems, that to follow it, to respect the law fully, is not to be conferred any identity or means of connecting with other humans at all. It keeps flowing, and those floating along on it never conflict with one another or cross paths but are carried away to the common destination of the empty ocean. To build, to walk, the bridge is to make connections with one another, yet in ways which tend inevitably to lead people into occasional conflicts.

This, then, is Miller's view from the bridge: it is no mere lookout point but an act of crossing, realized most profoundly on a metaphorical, not literal, register. Once one embarks upon it, one has made a decision, and the only way out is to turn right around and go back, and even that is not likely possible. Even though Eddie never physically walks on the bridge during the play or even mentions it at any point, it functions profoundly at a metaphorical level to determine the unfolding of his story. Crane's bridge is with Miller yet: by making legible the Brooklyn Bridge's transformation from physical to metaphysical presence, Crane has allowed the span, in the works of other writers, to do some of its most profound work more or less in the background.

Plate 1 Edmonton's High Level Bridge, as photographed by Don Pirot. (Copyright 2004; reprinted by permission)

V: Stories Told By, and About, Edmonton's High Level Bridge, 1913-2001

So far, I have examined the transformative potential of bridges mainly by discussing how such re-significations are manifested in several works of literary fiction. As we have seen, although these fictional works make readable narratives that built structures already tell about the intellect and the body in space, they have a constitutive role as well in reformulating such narratives and placing them within different, more sophisticated, contexts. For readers, they help to develop the means by which narratives in space can be appreciated, understood, and re-imagined. This chapter presents a kind of case study of one particular bridge throughout its entire history, by starting from the other direction (experience of the structure itself) and working through both its documented history and its representations in literary and cultural texts. It becomes apparent here that by reading this built space as both narrating and narrated text, we can discern a history not of events but of changing patterns of transformation. This focus has particular value both in identifying how authors of fiction, in responding to developments in the realm of spatial practice, help to create an intellectual climate which affects future developments. Moreover, and more pointedly, this method puts us in a better position to consider how different permutations of spatial practice allow people at large coherently to experience moments in which the built world—and the ideological enterprises which produced it—seem not to be immutable facts but potentially transformable fields.

Edmonton, Alberta's High Level Bridge (alternately named the "109th Street Bridge," "Ninth Street Bridge," or, among certain youthful portions of the population in the 1970s, "Hornby") today joins the city's university area on the south side to the legislative and central business districts on the north. A pared-down "close reading" approach suggests that the story the bridge tells its users in the pattern of impressions it presents them is a tale of the impossible made viable, of the impenetrable made comprehensible. There are, at present, four approved ways (that is, not involving jumping fences or climbing on girders) to cross the High Level Bridge: by the east or west walkways, southbound by the traffic deck in a vehicle (northbound travel by vehicle was eliminated by an integrated downtown traffic plan in 1980), and, from May to October, in an antique trolley car run by a volunteer society. Each crossing in fact proposes a very different passage through space. For one, there is the view from the west traffic walkway, which I take on my way home from the University of Alberta to the Oliver residential district on the north side. Approaching the bridge at an angle, one sees the entire east side of the structure in profile, then, descending a grade, enter the machine-space of this gear-and-girder railway trestle. I then approach a series of steel structural supports, hung with reflective yellow warning signs as they interfere with the walkway; even within the last three years, these frame members claimed the life of a speeding cyclist unable to avoid them.

At this point, I am granted a brief head-on glimpse of approaching vehicular traffic on the lower deck. Given that the railings here only stand waist-high to an adult, the moment is quite dramatic: it is rare that one can experience the effect of directly-oncoming traffic moving at speed which veers away only at the last moment. Having cleared all obstacles and caught our glimpse of the traffic deck, I am out on the west walkway, overlooking the majestic North Saskatchewan River Valley. In *The Arcades Project*, Walter Benjamin notes that on a pedestrian sidewalk, "the city dweller in the course of his most ordinary affairs, if he is on foot, has constantly before his eyes the image of the competitor who overtakes him in a vehicle.—Certainly the sidewalks were laid down in the interests of those who go by car or by horse" (443). Out on the High Level's pedestrian walkway, however, the encounter between pedestrians and motor vehicles is more chaotic and disorienting than hierarchical: as one is separated from the traffic by a lattice of huge steel girders, the oncoming traffic is mainly heard, not from far off but as a sudden onrush, accompanied perhaps by a brief, veiled glimpse of the passing vehicle. In organizing experience this way, the bridge implies that to drive is to submit to the terror of fragmented perception, while to walk is to have one's body subsumed to the machine, and, perhaps paradoxically, in doing so to be made whole.

On foot, the structure itself is perfectly regular, for unlike suspension or cable-stayed bridges which when crossed present a drama of rising and falling of support members, what drama obtains to the High Level passage comes from the falling and rising of the river valley banks themselves and from the pattern of revelation of the natural and built features surrounding the bridge. On the span, one moves from openness over the valley toward a built-up cityscape. Since the bridge runs at a slight angle to the grid pattern of the approaching streets, no logical route through the approaching built-up area is apparent for most of the crossing. The river, an absence too far down to see from any remove, is revealed as shallow and clear; its channel, the course of which has been hidden and mysterious, now appears wide and navigable as it curves gently off to the southwest; the shape of the Light Rail Transit bridge below and to the west (set off by train tunnels into the river valley banks on each side) becomes apparent and animated at regular intervals by the passing of subway trains; what first appears as an entirely wild, overgrown area on the north bank turns out mostly to be a manicured golf course delineated by a well-developed traffic thoroughfare following the north riverside. To look *through* the structure while walking, moreover, is to experience a drama of always-incomplete unveiling. One can concentrate on the provincial government's Terrace Building perched atop the north shore to the east of the bridge, and, given the play of interacting vertical and diagonal truss members, see the building revealed in an endless number of ways, no two alike, each only fragmentary and ephemeral.

In a vehicle, to drive southbound on the lower deck is to be surrounded by one long, unchanging steel tunnel, a rare experience in the Canadian prairie. When I drive it myself, I feel that at last *this* is the purpose for which my automobile was built: to be a personal yet perfectly adapted component of a total mechanical system. For the minute or so that it takes to make the passage, all mysterious desire is fulfilled, all lack—lack I did not even realize I had felt—redeemed.

Out on the streetcar, in the summer, the supporting structure of the bridge itself is no longer visible, except for the flat, level, wooden-planked deck. At long last, one is given complete visual mastery of the river valley: when perched high above everything else in the vicinity, nothing impedes one's panoramic vision. Like Barthes' Eiffel Tower, which "makes the city into a kind of nature," and in so rendering "the swarming of men into a landscape, . . . adds to the frequently grim urban myth a romantic dimension" (8), as streetcar rider one becomes evaluator of the city as presentation, as sign of the rewards of planning and effort. Even more so than the Eiffel Tower, the High Level Streetcar's view is an expressly nostalgic one: the car itself is over eighty years old and runs on a deck where regular streetcars have not been in service since 1951, and, in fact, which has seen no commercial use at all since the last CPR train passed over in 1989. Riders are not only above everything in the way of objects but above time itself, and thus find themselves encouraged to assess the surrounding city through the viewpoint of a long-gone era's desires and dreams of civic greatness. Would the streetcar riders of the 1920s, I am compelled to wonder, feel that the roads and paths of the river valley, the efficient LRT service running along the lower bridge, the tall business towers of downtown, and the (comparatively) modern infrastructure of the University of Alberta represent the realization of their aspirations for the future of Edmonton?

This is one close reading of the stories the High Level Bridge as physical passage tells its users about geography and history as it offers passage over the North Saskatchewan river valley. Yet it is not the only story the bridge has ever or could ever tell; in fact, this telling is deeply marked by a history of almost one hundred years of storytelling, all of it variously characterized by desire, triumph, frustration, some complacency and smugness, and, above all, wonder. In fact, I argue that the High Level Bridge has been narrated in four general ways over the last century: as the completion of civilization's destiny; as our obsolete infrastructure legacy, in need of pragmatic transformation; as only apparently pragmatic (and still outdated) but possessing mystic, metaphysical power; and finally, as living museum, preserved in a former incarnation.

As previously discussed in Chapter III, in "Function and Sign: Semiotics of Architecture" (1968; English translation 1986), Umberto Eco proposes that built space *"communicates the function to be fulfilled"* (emphasis original) and, moreover, "denotes [its] function conventionally, according to codes" (59). A stairway communicates the idea that it is a means by which, of used correctly, a body can progress diagonally upwards in space. Yet objects have a connotative function as well: "A seat tells me first of all that I can sit down on it. But if the seat is a throne, it must do more than seat one: it serves to seat one with a certain dignity" (64). Eco, however, discounts the stability of any distinction between denotative and connotative functions—the two dovetail with one another, and meaning flows back and forth between them. Because a builder cannot make a new spatial form work *"without the support of an existing process of codification"* (63; emphasis original), in functioning built space is "capable of *successive meanings*" by which its "sign vehicles are capable of being filled" (61). Any function to be fulfilled, Eco's work implies, is a basic narrative: from the bottom of the stairs, the body makes a passage to the top, experiencing a linear series of impressions along the way. The codes by which space functions must necessarily be narrative codes: we must understand the transformation which will occur in the story (even a transformation so simple as the physical movement of the body from one place to another) in order to see the value of using the space.

In the case of the High Level Bridge, the passing of human generations bears witness both to the existence of a particular shared spatial code and, with its passing, the search for narratives to restore it. This space cannot be understood to have been produced once and for all as universally readable text by a series of practices. As a defined movement across space, people find it intriguing in terms of its increasingly mysterious promise to transform its users. As we shall see, it is precisely the architectonics that make it difficult to read (and write) which give birth to the signifying practices that continually re-create it.

1900s to 1940s: "This has at last been achieved"[1]

The overriding impression one receives from studying the discourse surrounding the building and early use of the High Level Bridge is the sense that its achievement was total and immutable and that its passage defined and contained all meaning in its own terms. When this bridge was first planned, the banks it joined belonged to two different municipalities: the City of Edmonton to the north and the City of Strathcona to the south. Both cities contributed to the cost of its construction and it made possible their successful amalgamation, as it was expressly intended to do. What strikes one most about this enterprise is how confident the bridge's backers and builders were that it would completely realize all of their needs and aspirations at one stroke: truly, it would singlehandedly transform Edmonton from an agglomeration of scattered settlements into the region's great unified metropolis. No stories would need to be told about the bridge in order to make legible its transformative effect. Instead, the structure itself would make legible and concrete the city's transformation on its own.

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[1] Chas. W. Niemeyer, "Stupendousness of High Level Bridge is Amazing," *Edmonton Journal* 6 September 1913: 1.

The Low Level Bridge had been erected a short distance downriver (to the east) in 1902, so the High Level was not the first fixed means of passage from one bank to the other. Roughly where the High Level stands, however, ran local businessman John Walter's famous cable ferry, an Edmonton institution from 1882 to 1913. According to one account, Walter had to make a special trip to Winnipeg for the cable, which he brought back by Red River cart. When the cable was rigged across the river, a scow could be attached to it by a system of two lines; then, depending on which end of the boat was pointed upstream, the river's current would push it back and forth (Mair 49-51). This ingenious if somewhat rudimentary solution was vastly preferable to an earlier, non-cable ferry—in a 1913 interview, early Edmonton mayor Matt McCauley recalled that

> the only way to get across was to get a big boat, haul it some distance upstream, then jump on board and row and pull as hard as possible so as to reach the other side, praying fervently at the same time that the spot where you would land would be within a reasonable distance of where you wanted to get. (qtd. in Mair, 50)

Walter's scow was pulled out of the water each year before the river froze: at times when the ice was too weak to walk across, a bucket could be attached to the cable in order to convey packages—and even people—across. The service must have been fairly effective, given that despite Walter's habit of charging double the usual fare before dawn or after dusk (Rooke 48), it survived the construction of the Low Level Bridge and was only replaced by the High Level.

The Canadian Pacific Railway Company provided the primary impetus for the High Level Bridge's construction. At the time, the CPR's decisions were not only important to distant federal government bureaucrats and stockholders, but were absolutely central concerns to civic leaders. Accordingly, the city of Edmonton contributed $585,000 to the structure's $1.5 million cost, with the city of Strathcona and the federal and provincial governments collectively contributing an additional $72,000. The CPR itself spent $843,000 on the project (Vanterpool 13).

Politically, the bridge's genesis in the early 1900s was often tumultuous. The Edmonton, Yukon, & Pacific Railway (a line which despite the grandiose name was never really more than a small regional service of a few miles in length connecting the north and south sides of the river) had built the Low Level bridge in 1902 in order to bring trains into Edmonton for the first time. This railway and the Calgary & Edmonton Railway (a service running from the United States north through the province's two main urban centres) were then at odds. The C&ER also wanted to run north into Edmonton, but progress was only made when it was taken over by the CPR in

1903. That year, the CPR, under competitive pressure from the Canadian Northern Railway (a competing transcontinental line which later became the CNR of today, and which had decided to run its line through Edmonton, not Strathcona), applied for an act of parliament to allow it to extend its line into Edmonton. In the ensuing debate, it became obligated to do so.[2] Indeed, legislators and prominent community leaders at the time understood how crucial the location of such constructions were to the form and, ultimately, to the continued existence of their cities. As historian John Frederick Gilpin puts it, "The location of the [C&ER] terminus on the south side of the river had clearly demonstrated to Edmontonians that any reliance on 'natural advantages' without aggressive action would not automatically lead to economic growth" (133).

Inter-governmental wrangling affected the bridge's construction at several junctures. In 1905, as the structure's final location became apparent, residents of 109th and 100th streets, whose properties would be adversely impacted, submitted a petition to the Board of Railway Commissioners calling for the project's cancellation. The board eventually met in Edmonton in 1909 and ruled CPR would have to compensate these property owners.[3] The next year, in 1906, a petition nailed up in Strathcona on the sixth of April demanded that the town council offer the CPR up to $50,000 for a traffic deck to be added to the new structure. This remarkable document's first signatories include a veritable who's who of important south-side figures of the first part of the twentieth century, including John Walter, A.C. Rutherford (the first Premier of Alberta), and others, indicating the bridge's perceived importance to the area's entire population.[4] It is unclear whether the city of Strathcona ever earmarked part of its financial contribution for this purpose directly in response to this agitation, but the unusual lower traffic deck certainly did become a reality in the end.

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[2] Eric J. Holmgren, "What is this bridge coming to?" *Edmonton Journal* 15 Aug. 1980: A6.

[3] Eric J. Holmgren, "What is this bridge coming to?" *Edmonton Journal* 15 Aug. 1980: A6.

Although the unique proposed double-deck design quickly drew some national attention, the entire project remained at times in serious doubt. In a 1907 letter, Mayor W.A. Griesbach confirmed to a reporter from the *Railway & Marine World* that "The CPR Co. will construct a High Level Bridge between Edmonton & Strathcona at an estimated cost of between $650,000 and $750,000. Negotiations are underway with a view to having Vehicular Traffic Facilities attached thereto." Griesbach's thoughts in the letter end on a rather more tentative note: "I am not at present in a position to say whether this scheme will be carried or not. I am hopeful that it will be."[5] One potential deal-breaker, for instance, was the question of whether all the stakeholders who had agreed to support the project would actually pay up when the time came. In June of 1910, a newspaper article reported that a special delegation of Edmonton Mayor Lee, Mayor Duggan of Strathcona, Alderman Gariepy, and Messrs. R.B. Douglas and James McGeorge had formally called on Premier Sifton (and had obviously, of course, mentioned their visit to the press). They were told that the province's share of the building money was forthcoming; in McGeorge's words, "Our interview was the most business-like and satisfactory that any deputation could ever expect to have. The Premier took but a few moments to tell us what the government would do."[6] Eventually, the money arrived, but not without more stalling to come.

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[4] Petition. City of Edmonton Archives M.S. 209, File 173.

[5] W.A. Griesbach, letter to *Railway & Marine World* magazine, 10 December 1907. City of Edmonton Archives M.S. 209, File 114.

In Gilpin's assessment, some in Strathcona had seen the High Level Bridge as making possible their municipality's future as a separate entity from Edmonton, since it would allow rail lines coming in from the east to cross the river at their community instead of at Clover Bar some miles to the east, and thus hopefully keep their freight-handling infrastructure economically viable in the process. However, as the bridge was being constructed, it became apparent that it would act as a force of amalgamation between the two municipalities. Gilpin quotes from an open letter from Strathcona Mayor J.J. Duggan to John A. McDougall, mayor of Edmonton:

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[6] "Sifton Gives Definite Promise of Bridge Grant," *Edmonton Bulletin* 2 Jun. 1910: 1.

> With our present inadequate facilities in the way of bridges, of direct communication between the north and south side of the river, union would mean but little more than a name and we would hesitate to submit a by-law to the burgesses for ratification because we do not believe it would carry.[7]

For Gilpin, then, "The establishment of these transportation facilities played a significant role in changing Strathcona's attitude towards amalgamation. Prior to their creation, Strathcona felt that its interests would not be adequately dealt with by a north side government" (141).

And yet the idea of bridging the valley at a higher elevation was not unprecedented in the popular imagination of the day; rather, it was thought to be a virtually inevitable addition to the region's geography. The *Edmonton Capital* printed an illustration of the planned bridge in August of 1910, one which turned out to be remarkably accurate.[8] This particular type of railway steel-trestle type bridge was being built everywhere at the time, after all, and Edmontonians at large saw the High Level's construction as only a matter of completing what could already be popularly imagined and desired. In a promotional publication entitled *Edmonton Nineteen Hundred Ten*,[9] an anonymous author, in the volume's introduction, paints a scene of the city's development in which "Nature has intended that Edmonton should be a great city and the marketplace of one of the richest regions in the world. Nothing now can retard its progress. Its own impetus will carry it steadily forward to a high place among the busy centers of the world of commerce." In his panegyric, the author directs the reader's attention "Across the green woods of the southern bank of the river," noting that

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[7] *Strathcona Plain Dealer*, 15 Sep. 1908; qtd. in Gilpin, 140. A letter of 20 July 1907 from Wilbert McIntyre to Edmonton Mayor W.A. Griesbach further confirms that the river valley, despite the existence of the Low Level bridge and Walter's ferry, continued to be a barrier between the two cities. McIntyre writes, "I intended calling on you at your office in Edmonton, but have been unable to get over the River, but can assure you that I shall be pleased to meet you at any time you may arrange, and discuss the matter of the High Level Bridge between Edmonton and Strathcona" (City of Edmonton Archives M.S. 209, File 78).

[8] "The C.P.R. High Level Bridge, as it will appear when completed," *Edmonton Capital* 4 Aug. 1910: 4.

> high on the south bank stand out against the sky the towers and roofs of the City of Strathcona, our Twin City, which is the university center of Alberta, and which will be soon separated only by the half-mile stretch of the new High Level Bridge. Work on this bridge goes on day and night, and it is expected that trains will cross it in 1911. (2)

This estimate was only slightly optimistic (that is, underestimating construction time by a mere factor of three), but intriguing for its entirely correct anticipation of how the bridge would make possible a new way of inhabiting urban space in the region. "A few blocks beyond the end of the [not-yet-existing] bridge," the author goes on to write, "we come upon the stir and hum of the principal retail business street—Jasper Avenue" (2). Even before being completed, the bridge made possible the idea of a downtown with specialty retail stores of the type which could not survive within local neighbourhoods but required a regional shopping public. Such development was precisely what resulted with the structure's completion.

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[9] Promotional pamphlet, City of Edmonton Archives, 971.233.

Not surprisingly, then, the reigning notion among political leaders and opinion makers was that the project be completed as urgently as possible. At one point in 1911, the *Edmonton Daily Capital* had assuaged the public's impatience by relating some comments by George Young, erecting superintendent for the Canadian Bridge Company. Young took a hard line on construction efficiency, saying, "No time will be lost in connection with the work. We are not here for our health. Labor is expensive and time is worth money to us. Every effort will be put forth to have the job completed at as early a date as possible."[10] Moreover, on October 3, 1912, a *Journal* editorial on a structural steelworkers' strike on the bridge construction site called for "immediate attention of all the parties to this great undertaking. The early completion of the structure means so much in a public way that everything possible must be done to prevent the trouble being of long duration."[11]

In 1913, the bridge was complete. To mark the occasion, reporter Charles E. Niemeyer of the *Edmonton Journal* sent requests to the three main contractors for statistical information on the structure to include in his

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[10] "Bridge Erection of Steel in Two Months," *Edmonton Capital* 23 Nov. 1911: 1.

[11] "Immediate Action Demanded Respecting High Level Trouble," *Edmonton Journal* 3 Oct. 1912: 4.

Plate 2 The High Level Bridge under construction.
(City of Edmonton Archives, EA-10-324)

reports. The letters he received, fortunately preserved today in the City of Edmonton archives,[12] establish much of what has been known about the physical aspects of the bridge in the city of Edmonton ever since. The Canadian Bridge Company of Walkerville, Ontario (incidentally, the same company involved in the 1907 Québec bridge disaster on which Cather's *Alexander's Bridge* is based), which had erected the steelwork, informed the *Journal* that, among other things, the High Level Bridge is 2,478 feet long, 157 feet high from the wooden planks on the rail deck to the water level (making it the fourth-largest in the Dominion of Canada at the time), able to contract or expand up to thirty inches to accommodate changes in temperature, and that if all its steel were melted down into a giant cube, it would measure thirty-three feet on a side. John Gunn & Son related that each pier contains 68,000 cubic feet of concrete (a total of 25,000 barrels for the whole project), and that these piers are "among the highest" in the world, although not the highest, as Niemeyer had optimistically hoped. The latter company had employed one hundred and fifty men on the bridge and had lost three to fatal construction accidents.

Niemeyer annotated the first of these letters with suggestions of how he might make these figures easier to grasp for his readers. Next to the company's statistic, "Total length of steel of each piece to be placed end to end. About 900,000 feet," he writes, "compare distance around city"; by a reckoning that the city's circumference in 1913 was twenty-seven-and-a-half miles, the steel would have circled the city nineteen times. Where the company suggests that the bridge could support a live load of "30,000 tons with the usual safety factor of 5," he wonders, "No. of locomotives in weight." At being informed that the total area of steel to be painted was "roughly 860,000 square feet," he suggests to himself to translate this figure into "gallons of paint needed" (five thousand). In effect, such reasoning reveals an attempt at translation in spatial terms, but only from the utterly abstract into the impossibly expansive. On some level it puts things in human terms, but ultimately ends up suggesting the futility of individual effort and the irrelevance of the human body as means of comprehension. The *Journal* reporter did not think to compare the figures he received with the height, weight, and stride of an adult man, or of the volume of groceries, the size and weight of home furnishings, or with the price of a haircut. The idea that a line of steel could be laid out to circle the city nineteen times is incomprehensible: not only could an individual never fathom completing even a tiny portion of that task, but she would not even consider walking the city's perimeter that many times. We are awed by these numbers, then, but mostly perhaps by their sheer absurdity, their utter lack of relationship to any human scale. The bridge, in its glory, in this era represented the mind's encounter with infinity, but only a public, disembodied infinity. The statistical language of the bridge is self-referential and narrates people's bodies in a distinctly non-domestic context. It is not an extension of the way we already are—it creates a new field of reference in which people themselves may be redefined.

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[12] City of Edmonton Archives, High Level Bridge clippings.

For all of this, the bridge's opening was never marked by a proper ceremony. Part of the problem was that with its four modes of transportation, the bridge ended up having four different openings. On June 2, the first train crossed by the upper deck. An article in the *Edmonton Bulletin* commemorating the event was puzzled by a "complete absence of public ceremony in connection with the historic event" (although many dignitaries were in a fact on board, and the many photographs of this first train in the archives indicate that many photographers were present to record it).[13] In fact, this article appeared only on page eight! Such a tone of surprise that civic leaders would not want to stage an elaborate ceremony recurred for some time as anniversaries of the bridge's construction came and went un-celebrated. On May 11, 1938, for instance, the *Journal* took the time to report that "City officials said Saturday it was unlikely there would be any formal observance of the [25th] anniversary [of the bridge] when June 2 rolls around."[14] By 1962, a newspaper article would merely relate that "Tomorrow the High Level Bridge will silently mark an anniversary" [its 49th], without betraying any expectation whatsoever that such an anniversary would need to be commemorated by public ceremony.[15]

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[13] "First Train Crosses on High Level," *Edmonton Bulletin* 3 Jun. 1913: 8. A freelance writer for the *Edmonton Journal* mysteriously reported on 15 August 1980 that "on June 2, 1913, the first train steamed over the bridge into Edmonton to the accompaniment of whistles, horns, and the usual flowery speeches." I have found no other indication anywhere that this was the case, and, as above, some fairly convincing evidence to the contrary. It is understandable, though, that the article's author could make this assumption, for commemorative ceremonies for the openings of such public works projects were just as common then as today, and far more elaborate and better publicized. The opening of the Alberta Legislature the previous year drew a huge attendance and much royal pageantry, with Canada's Governor General, the Duke of Connaught, in attendance (MacGregor 197).

Returning to 1913, the next opening would be the streetcar line; here, the simmering tensions between the CPR and the governments of the day again came to the fore. On August 2, the *Edmonton Daily Capital* reported that streetcar service could not be started "because the CPR has an immense pile of gravel directly in the way of the street car track. The street car company asked the CPR to remove the gravel, but so far it has remained untouched."[16] This wrangling only intensified the general impatience to see the bridge in full operation. On August 4, the *Daily Capital* printed that a report from the City Engineer "informs the commissioners that the roadway on the lower or traffic deck of the high level bridge will not be open for traffic before October 1."[17] In an editorial in that issue, the *Daily Capital* opined that "In the handling of this matter the Canadian Pacific is following the arrogant, inconsiderate and regardless tactics which are the greatest factors in creating that feeling of resentment which always exists in the public mind against the corporations and corporation methods."[18] A few days later on August 7, that publication informed the public that a single streetcar track was to be laid *around* the big gravel pile, with service to begin the following Monday in conjunction with the opening of that year's Edmonton Exhibition. "This service will mean a great deal to the residents living on the south side, especially during exhibition week when it would be almost impossible to avoid many delays if only the present low level bridge service were in operation," suggested the *Capital*.[19] So it was that the first streetcar crossed the High Level bridge on August 11, 1913. The sub-headline to the *Journal's* report of the event is an immortal Edmonton classic: "First Trolley Car Travels Bridge Over Saskatchewan, Giving Passengers Chill as They Gaze Into Abyssmal [sic] Depths Below."[20]

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[14] "City's $2,000,000 Bridge Is Near 25th Anniversary," *Edmonton Journal* 11 May 1938: 9.

[15] "Old Timer," "High Way to Edmonton," *Edmonton Journal* 1 Jun. 1962.

[16] "No Car Service to South Side for Two Months," *Edmonton Capital* 2 Aug. 1913: 1.

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[17] "Traffic Deck on High Level Not Ready 'til Oct. 1," *Edmonton Capital* 4 Aug. 1913: 1.

[18] "Delay on the High Level Should be Referred to the Railway Commission," *Edmonton Capital* 4 Aug. 1913: 4.

[19] "15-Minute Service Over High Bridge," *Edmonton Capital* 7 Aug. 1913: 12.

[20] "Street Cars Containing City Officials Pass Over High Level," *Edmonton Journal* 11 Aug. 1913: 1.

The pedestrian walkways opened on August 31. As local historian Tony Cashman relates the event, "A steady stream of Sunday strollers turned out to try the high-level walk. A society editor predicted that the bridge would become the most favourite promenade of Sunday pedestrians."[21] A few days later, the *Journal* made use of the statistics described above (which it had received in June) in a full front-page feature on Saturday, September 6, 1913: "Stupendousness of High Level Bridge is Amazing—Mammoth Undertaking After Three Years of Men's Labor is Now a Monument of Beauty." As part of this coverage, most of which indeed concerned the project's statistical magnificence, The *Journal* published a composite photograph of the bridge shown behind the dome of the new legislative building in order to demonstrate that the steel span was "but 50 feet lower." Despite the use of the term "Monument of Beauty" in the subtitle, the article contains nothing resembling aesthetic criticism of the bridge itself. It becomes clear that what is meant by "beauty" is the stunning statistical achievement of the structure, which redefined the bounds of human possibility in this part of Western Canada, thus transcending any human scale and defining its own aesthetic context. What this meant for actual humans, after all the yearning and impatience for the structure to be built (an inclination Niemeyer describes as "the efforts of far-seeing men"), was actually somewhat unclear: "Future benefits which the city will derive from the possession of such a magnificent structure, it is impossible at the moment to prophesy."

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[21] Tony Cashman, "Edmonton's new bridge . . . truly the high-level variety," *Edmonton Journal* 13 Oct. 1976: 35.

Yet for all of that, the bridge was not yet quite open. In a wonderful anecdote related by Tony Cashman, the traffic deck was complete but padlocked, pending the CPR's receipt of $175,000 of funds still owed for the project by the provincial government. Wrangling went on between the antagonists and within the Legislature itself for three weeks. The day before the traffic deck was officially to be unlocked, however, according to Cashman, boisterous University of Alberta students stormed the barricades and paraded across the bridge, led by a donkey.[22] With that donkey's majestic passage, the High Level Bridge was at last fully in service.

For quite some time in the period following the bridge's completion, it made no appearances in fictional writing. Of course, Canadian literary publishing itself barely existed at this time, and little fictional writing about Edmonton was in circulation. And yet, although it is of course hazardous to draw conclusions from a lack of any evidence one way or the other, it seems fitting that the bridge in its early years was apparently not an interesting subject or setting for any fictional writer. For the young city of Edmonton, the

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[22] Tony Cashman, "Edmonton's new bridge . . . truly the high-level variety," *Edmonton Journal* 13 Oct. 1976: 35.

High Level Bridge did *everything* a bridge could, much like the Brooklyn Bridge which New York Mayor Abram Hewitt celebrated upon its opening for being able to produce "absolute stability" from "an aggregation of unstable elements, changing with every change in the temperature and every movement of the heavenly bodies" (see Chapters I and IV above). Edmonton's great bridge carried all the rail, streetcar, wagon, automobile, bicycle, and pedestrian traffic that existed at the time with aplomb, as it was designed to do. It needed no further explanation, beside that of the type offered in Niemeyer's article, to imbue it with meaning and value. In fact, it was not even given a name until the 1950s. Until then, newspaper writers simply referred to it with the adjectival phrase "high level bridge" and this sufficed: once more, the language with which the bridge narrated space was somehow, vitally, its own. Moreover, its history was not yet shrouded by the mists of time: people of the day well remembered the stages of its construction and the mindset of those who had built it. In an article which the *Journal* published in September of 1954 titled, "Edmonton's 'High Level' Has Anniversary Monday," the author, identified only as the "Old Timer," writes that "things were different with the High Level. It began life as a highly-publicized engineering marvel, and its inch-by-inch construction over three years was something in which everyone in the city took an interest.

'Sidewalk superintendents' had their field day, for here was a job that wasn't concealed by barricades."[23]

In other words, the bridge was a sign that the city had become civilized, and the marker of civilization for each individual citizen was the ability to make proper use of the structure for the purpose for which it had been built. Crossing, as we have seen, is always a matter of language, and what stories this language could tell, Edmontonians smugly assured themselves, were well-understood by the newly civilized. Not surprisingly, such conceptions of the "proper" at times took on a markedly racist tone, as white leaders and opinion-makers of the day assured the white populace that they could take comfort in their progressiveness by contrasting it with the supposedly backward ways of First Nations people still present. The idea, of course, was doubly useful, for along with granting the honourable mantle of civilization to the settlers, it also made natural and inevitable the vanishing of First Nations people from the region, thus papering over the aggressive efforts—carried out against great resistance by organized and knowledgeable people—required to achieve this convenient erasure. *Edmonton 1910* had, in the midst of describing the hustle and bustle of commerce on Jasper Avenue, paused for a moment to sketch out the presence of the contrasting First Nations man: "Then, too, one sees, perhaps wending his way on his cayuse through the bustling traffic of the city, a Cree Indian, stolid, uncomprehending, unconcerned, a relic of the past, a past which only yesterday was the present, but today is little more than a matter of tradition" (2). Likewise, in May 1917 the *Bulletin* reported that a "Hobbema Reserve Squaw" had stopped two trains on the High Level Bridge, not understanding that she had to buy a ticket at the station and catch the train on the platform to get on board. "The squaw tried to climb aboard but was again repulsed," related the paper, and "It is reported that the language employed in conveying the refusal was very energetic."[24] Non-native readers are invited here to have a laugh at the benighted primitive together: the ways of the bridge were the new white ways, and it denied nothing to those who knew how to use it correctly.

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[23] "Old Timer," "Edmonton's 'High-Level' has Anniversary Monday," *Edmonton Journal* 11 Sep. 1954; 3.

Soon, however, a kind of low-level yet persistent fascination began to develop with the ways in which the bridge's pragmatic functioning could be transgressed by members of the polity. In 1922, two university students, while celebrating graduation, drove across the bridge's upper deck.[25] The feat was repeated at least once more: in 1932, the *Journal*, based only on a set of wheel marks found on the top deck, reported that "Defying death in a perilous ride, an unknown motorist drove his car across the top deck of the high level bridge some time between 1:00 a.m. and 7:00 a.m. Sunday." The driver had almost gone over the edge, and "only a third street car rail saved the driver, and any passengers he may have had, from death."[26] Both feats were obviously worthy of being reported in the press.

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[24] "Hobbema Reserve Squaw Stops Trains on High Level Bridge," *Edmonton Bulletin* 7 May 1917: 3.

[25] "Edmonton Reaches New Heights," *Edmonton Sun* 18 Jul. 1995: Sports 11.

In another stunt in July of 1927, the legendary Canadian pilot Wilfred "Wop" May famously flew his small plane under the bridge and then around the dome of the legislature in a demonstration of the aircraft's manoeuverability.[27] The bridge as means of passage over the valley, May's stunt implied, was limited compared to the capabilities of his new mode of transportation. He, on the other hand, could trace a narrative through four dimensions of space, one which could thematically join the bridge and the Legislature in a single arc. In a much less spectacular yet still compelling action, University of Alberta hospital nursing graduates in this era developed a tradition of throwing their black civilian stockings over the side of the bridge in commencement ceremonies and then donning their new white nurse's stockings.[28] All of these actions revolve around what was becoming a central symbolic importance of the bridge to the city of Edmonton. This was a mechanical space where public transformations in perception could occur. The bridge was not only a highly visible location but a sign of the city's transformation from frontier town to metropolis; it in turn allowed users, in mild yet increasingly pervasive transgressions of its intended function, to mark their own rites of passage.

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[26] "Defies Death in Ride Across Top of Bridge," *Edmonton Journal* 20 Jun. 1932: 9.

[27] "Edmonton Reaches New Heights," *Edmonton Sun* 18 Jul. 1995: Sports 11.

[28] Alex Mair, "Bridge that made the difference," *Real Estate Weekly* 2 Nov. 1995: 2. Mair contrasts this happy ceremony with a 1990s "verbal

As the city moved into the depression of the 1930s, High Level Bridge lore, along with the rest of North American culture, became at once more prosaic and far weirder, depending on whether or not the person relating it was in a position of authority. On 9 September 1932, the *Edmonton Journal* published a 19th-anniversary writeup. The central focus now was on the structure's financial cost (a subtitle noted that the bridge "Cost $1 Rivet"), while regarding its size, "Other [statistical] figures about this big bridge are of interest, but add only incidentally to the impressiveness of the structure." In fact, all subheadings aside, readers were not supposed to dwell on the bridge's original cost at all, for, apparently, "The average citizen has never cared to question the prices that were asked and paid in connection with this big river-crossing project."[29] The values expressed here can be better

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dustup a little while ago when someone threw a bathroom scale over the side to mark a successful dietary program."

[29] A.W.F., "Crossing the River on High," *Edmonton Journal* 9 Sep. 1932: 12.

understood by considering how this article redefines the notion of aesthetic beauty. "As bridges go, it is, furthermore, a thing of beauty, by day or by night, in use or out of use," relates this piece's author. Beauty is no longer to be found in the way that the bridge has challenged the limits of the possible, but instead in its solidity and soundness:

> Fancy curves and arches, like the old suspension bridges used to have, are wanting, and there are no purposely ornamental features, such as smaller structures in our own city are carrying; but in its very solidity and sober straightawayness there is beauty. Down there below one sees it so.

In a troubled time, readers were apparently to be comforted by the idea that their city's leaders could build not something fantastic, but something reliable.[30]

Or *was* it so solid? In a fascinating article published in 1967, Tony Cashman relates the story of one Werner Mueller, who gained considerable local celebrity in the winter of 1934-5 by prophesying the bridge's imminent fall. By using a method of calculation based on "the vibrations of the stars," Mueller announced that the structure would collapse on Thursday, November

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[30] Six decades later, this view of the bridge as inelegant but laudable would be echoed as the now-antique bridge underwent restoration. This time, however, the bridge's solidity was not a matter of bearing structural loads but of enduring the years long enough to become emblematic of the city as a whole. In 1994, columnist Lawrence Herzog wrote, "All right, so it isn't the most captivating bridge in the world. But, 81 years after it was built, the High Level remains one of the longest, highest and heaviest spans in Canada. And, more than any other bridge, it says 'Edmonton' to residents and visitors alike" ("New Lease on Life," *Real Estate Weekly*, 13 Oct. 1994: 2).

1, 1934, at 6:53 PM. He made sure to warn the city council and the CPR, and also announced his discovery to the *Journal*, which went ahead and printed it. A crowd of three hundred gathered on the north side for the cataclysmic event, which, needless to say, didn't come off. A surprised Mueller re-checked his calculations and moved his prediction forward to 5:46 the following morning. When, again, the bridge failed to collapse, Mueller once more returned to his calculations, and deduced that the event would actually take place at 2:26 PM on January 25, at which point it would be accompanied by the simultaneous collapse of the legislative building. Several government employees skipped work that day and a large crowd once again gathered to witness the disaster. Fortunately (or unfortunately, depending one where one stands), the *Journal* had been right in 1932, and the bridge survived its own foretold destruction.[31]

Along with Mueller's prognostications, the 1930s saw the birth of Edmonton's two bridge babies. Both women were born in vehicles stuck in traffic on the bridge and unable to make it to the hospital on time. This does not in itself perhaps seem strange to today's sensibilities, except for the amount of public interest these children attracted. The first, born April 21, 1935, was named Olive Marie Poncella Beauchamp in a citywide contest,

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[31] Tony Cashman, "Werner Mueller; Or The High Level Bridge Still Stands," *Edmontonian* 5.9 (Dec. 16-Dec. 22 1967): 50-51.

"Poncella" being a bastardized version of the French word for bridge.[32] The second, Levila (from "High Level") Elizabeth Prier, arrived on the bridge at five o'clock in the morning on Sunday, October 30, 1938. The circumstances of Prier's birth also led to a "name the bridge baby" contest in the *Edmonton Journal*; the most popular suggestion was "Bridgette," but a Mrs I.E. MacFarlane suggested the winning choice. "It's an unusual name," Ms Prier was quoted as saying on her 21st birthday in 1959. "I guess that's why I like it so much."[33]

Although it is perhaps still conceivable that a baby would be named to be mark the unusual location of its birth today, it is much harder now to fathom such widespread social involvement in this marking. In the 1930s, however, if there was no need to write the High Level Bridge in the context of imaginative fiction, it was most likely because Edmontonians were sure that the bridge itself was the means by which they had re-written the geographical space of the North Saskatchewan river valley, and the two formerly-separate communities on each side, into a finished, complete, and functional form. And that being the case, the Bridge wrote *them*, they were eager to say, and they were eager to see one another bearing its name.

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[32] "Edmonton's 1st Bridge Baby Growing Up," *Edmonton Journal* 4 Nov. 1938: 13.

[33] "'High Level Bridge Baby' Marks 21st Birthday Friday," *Edmonton Journal* 30 Oct. 1959: 50.

What came after the Second World War, however, was a sense that the magnificent achievement now belonged to a different era and that it had become out of date. This sense of obsolescence, we shall see, helped generate a range of imaginative reflection regarding the span.

1940s to 1960s: "He just added another couple of decks to the old High Level bridge and presto, no problem"[34]

An interesting feature in discourse regarding the High Level Bridge first appeared during the 1930s and was repeated every half-decade or so at least through the 1960s. This quirk is a newspaper article informing the Edmonton populace that in extremely cold weather, due to steel contraction, the bridge is twenty-two inches shorter than in the summer. One rhetorically notable example, from January 14, 1950, states that "South siders may not know it, but the way home Saturday was shorter than at any time for the past seven years."[35] A throwaway cocktail-party fact, maybe, but within it lies a couple of ideas which became predominant in discussion regarding the High Level Bridge and other works of gear-and-girder engineering in the middle of the twentieth century. Firstly, the structure is mutable in its form, not solid—almost like a living thing; secondly, certain features of its design and function have been lost to the general public, which now needs gentle reminding of the bridge's structural aspects. Werner Mueller's mystic predictions aside, more doubt about the bridge's function began to seep into the public consciousness as the century progressed. In 1940, the *Journal* printed an article by H.R. Webb, Associate Professor of Civil Engineering, assuring nervous readers that there was absolutely no chance that the streetcar, which had at that point been running over the top deck of the bridge for twenty-seven years, would overturn or even derail in heavy winds.[36]

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[34] "Bridge Problem Solved," *Edmonton Journal* 1 April 1966: 3.

[35] "Cold 'Shrivels' Even High Bridge," *Edmonton Journal* 14 Jan. 1950: 1.

Yet beyond this particular doubt about safety, a changing world was placing considerable stress on the High Level's proper functioning. Most significantly, the ever-increasing number of automobiles on city streets made the narrow two-lane traffic deck suddenly seem to have not nearly enough capacity for conveying traffic over the river. This inadequacy was especially acute regarding the increasingly popular (and increasingly large) container trucks which the bridge was never designed to accommodate, and which had for decades been sustaining major damage while colliding with various parts of the structure (a situation which persists today). Moreover, during the Second World War, Edmonton was becoming strategically important to the Allied forces, who were anxious for geopolitical reasons to establish a strong military presence in Alaska. Edmonton's airport, for a few wartime years, became the busiest in the world (MacGregor 265). The American Government, in the meantime, in partnership with local administrations, constructed the Alaska Highway to link their northern territories with the rest of the continent. In January 1943, one of the most famous photographs in Edmonton history was taken. In it, U.S. Military Police in white winter gear pose on a jeep at the south approach to the High Level Bridge, beside a newly installed sign reading "Start Alaska Highway Edmonton Alberta." The bridge now no longer symbolically joined only the twin cities of Edmonton and Strathcona; instead, it became the jumping-off point to the northern leg of a cross-continental highway route—a lot to ask from a thirty-nine-year-old structure designed mainly for railway and pedestrian use. As it was, in the midst of the twenty-plus-year debate over how to modernize the bridge, a 1950 newspaper editorial opined that "Of course, the real solution for 'through' traffic is to route it around the city."[37] The decentralized urban

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[36] H.R. Webb, "High Level Bridge Track Safest," *Edmonton Journal* 26 Aug. 1940: 4. By sheer coincidence, in probably the most famous bridge collapse of the twentieth century, the Tacoma Narrows suspension bridge in the state of Washington tore itself to shreds in high winds on November 7, less than three months later.

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[37] "Bridge Plans Open Again," editorial, *Edmonton Journal* 28 Mar. 1950: 4.

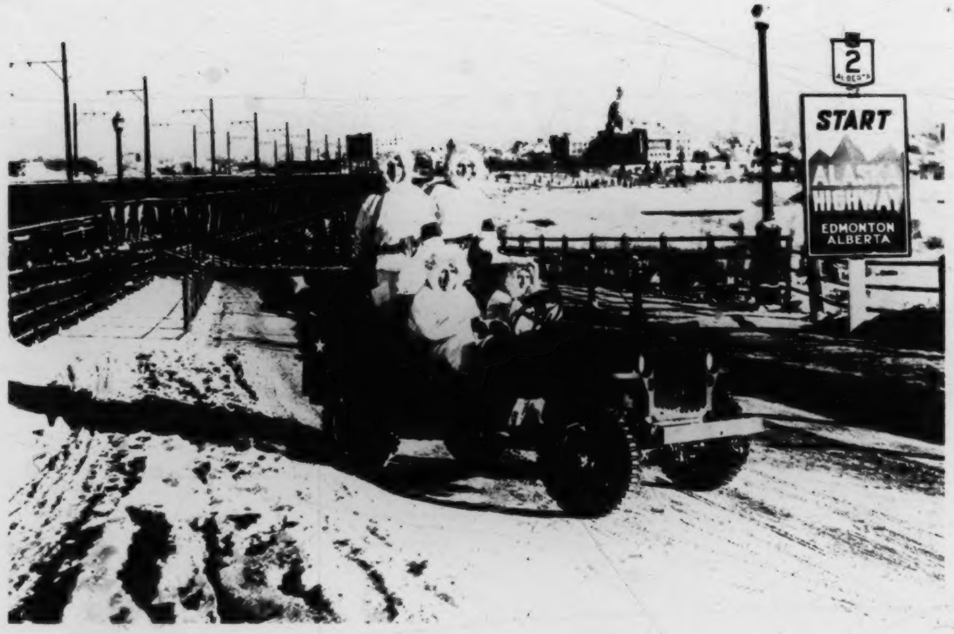
2
ALBERTA
START
ALASKA
HIGHWAY
EDMONTON
ALBERTA

Plate 3 American soldiers at the High Level Bridge's south approach, January 1943.
(Provincial Archives of Alberta, Bl. 456/1)

landscape of the era of automobile commuting was in its inception, and the bridge's long slide into functional irrelevance had begun.

As this slide began, the bridge began to appear in works of narrative fiction. David Grew's young-adult novel *Wild Dog of Edmonton* (1946) contains an early such mention. The book narrates the journey of Dwight Burnell, a young boy unappreciated by his adoptive farm family, who runs away with his young dog Whitepaw (whom the Burnells had ordered Dwight to give away) from the eastern part of the province into Edmonton, following the North Saskatchewan River. Just as they enter the city at the onset of winter, Dwight, who has fallen ill and been taken to the hospital, and Whitepaw become separated. The story is now focalized around Whitepaw's experiences in these unfamiliar surroundings. On entering the city via the river, Whitepaw sees "a black smear across the wintry spaces before him. It was the span of a great iron bridge stretching from one canyon lip to the other" (121).[38] Finding himself alone in the big, harsh city, Whitepaw must quickly learn to forage for food and seek shelter. He quickly finds a "narrow niche" (151) in one of the bridge's concrete supports, where he sleeps while not disturbing garbage cans, killing chickens, and getting into scrapes with other dogs in the deep cold of the Northern Alberta winter.

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[38] Although this bridge is never explicitly named in the novel as the High Level, since it is described as black in colour, spanning the entire valley instead of just the river, having streetcars running across it, and connecting Strathcona and Edmonton, it cannot be any other bridge.

In the end, of course, Dwight and Whitepaw are brought back together and are both wiser and more independent for the experience. Note, however, how closely the novel relates the inhabiting of space to the learning of language; in fact, it openly broaches the subject of language's elusive and arbitrary nature. On the way to doing so, Dwight himself, wanting to thank a particularly sympathetic schoolteacher for her kindness, is frustrated that "Words were so hard to find, and when one did find words, they rarely said what one wanted them to say" (14). Whitepaw, though canine, faces similar challenges; at one point early on, while hanging around the schoolroom, he learns that although "He didn't particularly like the smell of chalk . . . that was the smell which settled itself down in his mind like a word *for* the schoolroom" (59). Language here confers upon sensation an appropriate meaning; without it, one all too easily lapses into inappropriate behaviour in one's ignorance. Soon, it becomes clear that such language is not only a matter of proper naming, but of practising space correctly.

As such, Whitepaw becomes the Wild Dog of Edmonton (his exploits even get him into trouble with the Chief of Police) not because he's bad at heart but because he naively does bad things. His particular transgression, Grew further emphasizes, is that he does not know how to follow the proper passage which the bridge has been built to allow. The bridge was not built to be inhabited as a domicile and offers only minimal comfort when used as such. It is designed as public, not private, space, and sure enough, as

Whitepaw is menaced by an aggressive collie, his niche in the bridge support becomes uninhabitable: "Even the niche in which he lay seemed safe no longer," and so "his life in the big city, to which he thought he had so successfully adjusted himself," has turned "into a nightmare" (151). Thereafter, in his chicken-stealing exploits Whitepaw begins to walk across the frozen river, thus taking a route across the valley which is pointedly not that of the bridge. One moment finds him "crossing the frozen river diagonally, and picking his way cautiously to his niche in the concrete base, under the bridge" (160). Soon, as his bad behaviour becomes routine and his guilt disappears, we discover that "He knew just the right point from which to strike out diagonally across the frozen river" (175). He has, in other words, become acclimatized to his life of crime. In finding his owner and being redeemed at the end, he is therefore able to leave behind what is essentially a prohibited narrative practice. Henceforth, he will live in a domestic sphere and help Dwight pay back the damage he has caused to the city by pulling a newspaper cart along a regular paper route with Dwight, wearing a blanket reading, "THE WILD DOG OF EDMONTON—READ THE DAILY REGISTER" (197).[39]

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[39] The theme of unfortunate innocents wrongly inhabiting the cold, dangerous adult world of the bridge also appeared during this era in newspaper reports about the perils of children playing on the high girders. In 1954, the *Journal* reported that Chief Provincial Coroner Dr. M.M. Cantor, "who investigated the death of Peter Jacobs, 12, in a fall Saturday at the High Level Bridge, Monday warned parents to keep their children away from the

The Wild Dog of Edmonton therefore further develops the notion that the bridge had a language which needed to be learned in order to be crossed, and even suggests that a coming generation has been born without that language and needs to develop it in order to live in civil society. Still, the novel's imaginative register positively pales in comparison to the fictions of bridge redevelopment plans in civic discourse of this era. Now, people saw the bridge as out of date and entirely open to being reconstructed to meet current needs. Streetcar service, having been replaced in Edmonton as in other North American cities by diesel buses, ceased in 1951. Having freed up most of the bridge's top deck, this cessation unleashed a series of fanciful proposals for using the space which has continued to the present day.[40]

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bridge" ("Parents Warned of Bridge Danger," *Edmonton Journal* 25 Oct. 1954). In 1960, another child was sighted climbing on the bridge, bringing out emergency crews. They couldn't find him out on the span but soon noticed him bemusedly watching their efforts on his behalf from the shore ("Police Trail Boy on Bridge Girders," *Edmonton Journal* 17 May 1960: 1). Moreover, a *Journal* photo from 1969 caught two more children in the treacherous act of climbing on the steel beams ("Perilous Pursuit," *Edmonton Journal* 20 Oct. 1969: 15).

Although this dangerous activity must have occurred previously, it apparently wasn't newsworthy until after the War: tragedies involving children were family matters, not social issues. These reports peter out in the archival record after 1970. Speculatively, their decline was likely related to changing demographics of the neighborhoods immediately adjoining both sides of the bridge, as family dwellings gradually gave way to offices and adult-oriented apartments and condominiums.

[40] As it was, due to the recurring failure of each successive plan, the trolley's overhead lines were not removed from the bridge until 1958, the tracks themselves not until 1967. New trolley lines for electric buses were installed on the lower deck in 1981.

In June of 1946, even before the end of trolley car service, the first such scheme came to light. City Engineer A.W. Haddow had drafted a plan to reconstruct the top deck with four steel-grid traffic lanes estimated to cost $1,247,500, and had had a cross-sectional model constructed to illustrate it. His plan was supported by three reports filed with city commissioners over the next four years by P.L. Pratley, a prominent Montreal bridge designer. On November 2, 1949, Edmonton voters approved a money bill to fund the project (by a margin of 8,939 to 2,656 [41]), yet by March of 1950, as construction was being scheduled, an increase in estimated costs from $1,500,000 to $2,150,000 imperilled the enterprise.[42] A further referendum held in November of that year to raise an additional $500,000 for the reconfiguration was rejected and the project was delayed indefinitely, although it remained under consideration for quite some time to come.[43] The

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[41] "Edmonton Elects Parsons as Mayor; Money Bylaws All Approved," *Edmonton Journal* 3 Nov. 1949: 1+.

[42] "Plan to Delay Bridge Work," *Edmonton Journal* 27 Mar. 1950: 1+.

[43] In 1956, city consulting engineer C.G. Grimble filed a report rejecting the four-lane upper deck conversion. Ten years later, the *Journal* reported on May 28, 1966, that "Any schemes to modernize the High Level Bridge have been abandoned" ("High Level Overhaul Dropped," *Edmonton Journal* 28 May 1966: 3), and then, less than two weeks later ("What about the High Level?" editorial, *Edmonton Journal* 11 Jun. 1966: 4), relayed news that a METS (Metropolitan Edmonton Transportation Study) report called for a new high-level bridge two blocks upstream and, on June 13, that Grimble himself was suggesting that the bridge "could carry more traffic with additional lanes on the top deck" ("More Traffic On High Level Feasible, Says Engineer," *Edmonton Journal* 13 Jun 1966: 3).

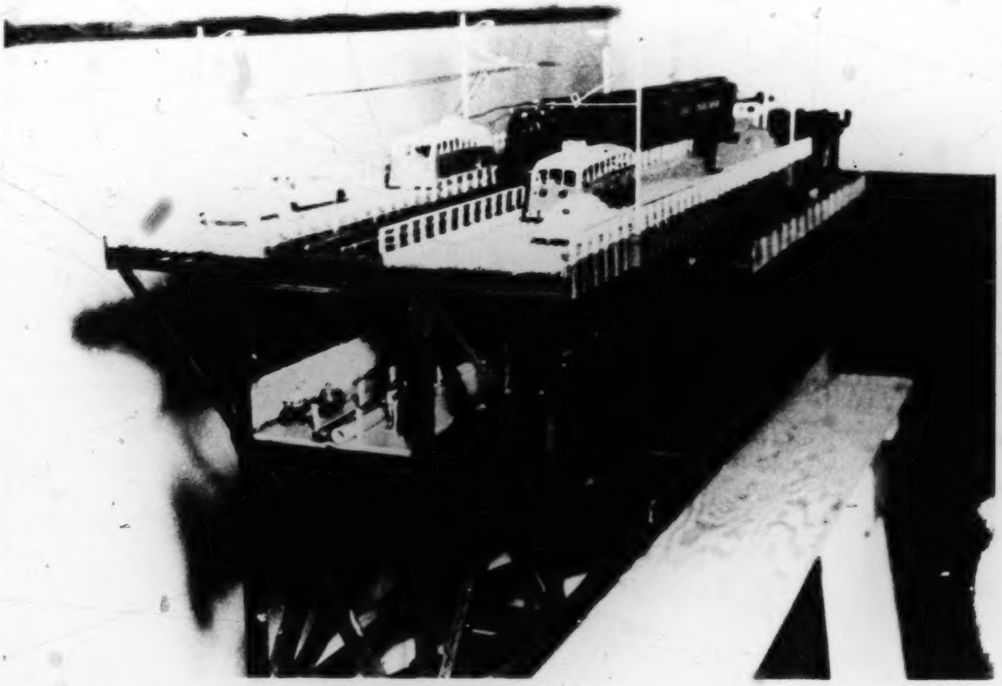

Plate 4 A.W. Haddow's 1946 model for the reconfiguration of the High Level Bridge's traffic and pedestrian decks, built by Sandy Mair.
(City of Edmonton Archives, EA-10-297)

dream of a better high-level automobile crossing in downtown Edmonton persisted into the 1970s, when construction of another high-level bridge was not only approved but actually begun a few blocks to the east.[44] However, vast opposition in communities on each side of the river scuttled the project soon after it was underway; to this day, the naked base supports of this new structure lie, mostly forgotten, on the south side of the river valley.

As if these plans to reconstruct the top of the bridge weren't enough, a newspaper report of December 1962 held that a suggestion to paint the High Level gold for Canada's 1967 centennial would supposedly by given "serious thought" at the municipal level.[45] Yet despite the considerable flexibility of imagination of these various plans, very few physical modifications to the bridge actually took place in this era. While the High Level was neither fully readapted to contemporary transportation needs nor painted gold, its approaches were somewhat reworked in 1971 (as the *Journal* put it, "The hairpin approaches to the High Level Bridge that once played merry havoc with the ulcers of ETS drivers will be no more when the bridge re-opens for traffic in mid-October"[46]), and somewhere in this general period the pedestrian handrails were painted orange in a rather more limited attempt to give the old bridge a more modern appearance. Still, what strikes one most here is the sheer range of imaginative activity surrounding this built space. The city's realization of its contemporary form was now definitely seen as the achievement of another era, an era which was owed no debt of veneration whatsoever. Of course, the post-war epoch's inclination to see built space as essentially mutable and malleable was also in part a legacy of the recent fighting in Europe, in which aerial bombing had, along with causing unprecedented civilian casualties, led to the razing of vast swaths of older cityscapes. In 1952, as it was, a report appeared that "Civil defence planners say there is a 'remote chance' that all present bridges at Edmonton could be destroyed or at least put out in the event of war."[47]

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[44] The dream lives on: in early 2004, popular mayoral candidate Roberto Noce proposed the completion of the bridge as a major part of his campaign platform. In a *Journal* article of 17 January that year, a representative from a major city real estate firm was quoted as saying, "We think a vibrant downtown is key to a vibrant city. A new bridge would provide a safer commute for drivers and cut down on the drive time because they won't be as bottlenecked" (B3).

[45] "Gold Bridge to Mark Centennial?" *Edmonton Journal* 7 Dec. 1962. See also editorial cartoon, *Edmonton Journal*, 20 Dec. 1962: 4.

Still, in a spatial field where all bets were off, any physical utopia could be conceived and, if enough money could be raised, brought into being without hesitation. On April 1, 1966, the *Journal* published a retouched photograph of the High Level Bridge under the title "Bridge Problem Solved"; the image showed a three-level version of the bridge with traffic capacity to spare, a "solution so simple city engineers will probably blush when they think about it."[48] As absurd an April Fool's prank as this retouched photograph was, it was in fact exceeded, this time in earnest, in 1969. Brian Eldred, a former Edmontonian then living in Winnipeg, won an architectural competition with his model plan to replace the existing span with a six-tier high-level bridge comprising two traffic decks and several levels of shops, offices, and residences. At the time, his proposal received an open (albeit mostly bemused) hearing at city hall.[49]

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[46] "Putting High Level bridge back on straight and . . ." *Edmonton Journal* 13 Aug. 1971: 47.

[47] "Heavy Traffic Poses Problem Of Bridges," *Edmonton Journal* 12 Jun. 1952.

Although so much North American urban-redevelopment thinking of this era now looks at best fanciful and at worst utterly insensitive to established, community-oriented ways of living (a legendary transportation scheme of the time, fortunately never realized, called for the construction of high-speed freeways throughout most of the natural wooded park-belt of

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[48] "Bridge Problem Solved," *Edmonton Journal* 1 April 1966: 3.

[49] Guy Demarino, "High Level bridge scheme hailed by city hall officials," *Edmonton Journal* 8 May 1969. In 1976, Eldred's giant six-level bridge was back in the news, now being bandied about as a plan ahead of its time that should have been carried out before high inflation made it unfeasible. Renewed, and surprisingly serious and sustained, interest in the scheme at city hall led to a serious *Journal* editorial the next year panning the idea: "Somehow, what started out last summer as an attempt to find a less expensive, less grandiose method to upgrade the Walterdale Bridge (the city administration originally wanted to spend $32.5 million but council wisely balked) has reached the stage where aldermen are being asked to consider this incredible proposal. . . . Incorporating offices or shops or dwelling, *a la* the London Bridge, *circa* 1800, into redundant bridge-building is . . . well, a bit whimsical" ("Whimsical Bridge," editorial, *Edmonton Journal* 13 Jun. 1977: 4).

Edmonton's river valley), it bequeathed a few quite notable legacies to the history of the High Level Bridge. For one, the spatial functioning of the bridge was now a subject of lively, imaginative conjecture, not an immutable fact reified in steel and concrete. Besides all of the reconfiguration schemes, it was in the 1960s that columns on High Level Bridge lore by local historians Tony Cashman, and, later, Alex Mair, began to appear in Edmonton publications.[50] For another, somewhere in this era, the old bridge finally received a name—sort of. The structure that W.A. Griesbach had referred to as the "High Level Bridge" in personal correspondence in the early 1900s, and yet which had consistently been called the "high-level bridge" by everyone else for almost forty years, had somehow in public discourse become the "High Level Bridge" once more. The mere adjective had solidified into a proper name: the bridge became known not primarily by what it does, but by the words previous inhabitants have used to describe what it does. While seemingly a minor point, the ramifications here are significant to the language used in the practice of crossing the structure. That language looked more and more, in the middle of the twentieth century, like an invention of a bygone era. Such a sense of distance itself generates a certain measure of wonder and intrigue, yet in a world where Canadian writers were enthusiastically exploring Canadian subjects in a new, vital way, one result of the bridge's fall from currency was a sudden flowering of fictional writing about it.

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[50] See, for example, Cashman's articles "Edmonton's First Speed Trap," *The Edmontonian* 50.2 (4-10 Sep. 1965): 3; "Werner Mueller; Or The High Level Bridge Still Stands," *The Edmontonian* 5.9 (16-22 Dec. 1967): 50-51; and "Edmonton's new bridge . . . truly the high-level variety," *Edmonton Journal* 13 Oct. 1976: 35. Also, in a column printed in 1971, *Journal* writer Art Evans reported the receipt of a letter from a reader telling him that Mayor G.S. Armstrong, in 1911, "insisted that the bridge be built four feet wider than the original specifications called for," in order to allow two loaded hayracks to pass one another (Art Evans, "'Two-Hayrack' Bridge," *Edmonton Journal* 19 May 1971: 21. Intriguing as this rumor is, the present author has unfortunately found absolutely no corroborating evidence whatsoever to substantiate it.

1970s to mid 1980s: "We would make a spectacular out of it"[51]

The High Level Bridge narrative described at the outset of this chapter was made readable just as much by the artistic achievements of the 1970s as by the planners and builders of the first two decades of the twentieth century. Across Canada, a new urgency to define "Canadianness" was being felt, and in Edmonton this enterprise led to some unprecedented fictional meditations on the nature of the city's particular layout and history. Although the current vogue is to distrust the construction of nationalisms, cultural or otherwise, there is no disputing the sheer vitality and sense of purpose in artistic productions of the time engaged with these concerns. Being Canadian, they suggest in various ways, is not a matter of ethnicity or even of history, but a distinct approach toward the inhabiting of space. In 1965, Northrop Frye had noted that among other things, Canadian literary writing tends to a "preoccupation with the theme of strangled articulateness." It is not difficult for Canadians to articulate our cultural and historical heritages, however, but our relationship to landscapes: the Canadian sensibility "is less perplexed by the question 'Who am I' than by some such riddle as 'Where is here?'" (220). Frye's crucial question would be very different were he to have phrased it "*what* is here?": in that case, the indeterminacy would have been over how Canadian space functioned as a distinct, identifiable entity. However, by posing the question of "where," Frye points out that the question of whether a Canadian means of inhabiting space is unique among others is contiguous with that of whether we can locate ourselves relative to distant coordinates at all. In this analysis, on three sides our landmass has no clearly-defined borders and our cities are spread out at impossible distances from one another over sparsely inhabited terrain. We need a particular mythology to imagine meaningful connections between one another, as the forces of commerce alone cannot bind our isolated outposts into a coherent nation.

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[51] "Hornby's hurrah," editorial, *Edmonton Journal* 15 Apr. 1978: A4.

I won't rehearse the many objections which have been raised to this theory since its publication forty years ago (nor the details of its recent rehabilitation in many corners), but cite it to suggest once more that in an intellectual culture concerned with the identification or, indeed, composition of shared cultural myths—that is, in one very much analogous to that of Lewis Mumford and Hart Crane in 1920s New York discussed here in Chapter IV—the act of *traversing* space takes on significance on a mythical, spiritual plane. The High Level Bridge, a space in which history, identity, and community are practised, was itself redefined in the midst of Canadian attempts in 1960s and 1970s fiction to define the uniqueness of the Edmonton landscape as a place difficult to articulate using representative modes imported from elsewhere, yet affecting those who live in it in (perhaps) unique ways. As it is, the bridge, authors of this era imply, while appearing to be an utterly prosaic, rational, and efficient structure, is possessed of mysterious spiritual forces. To cross it is not only to move in space and time, but also, in the right circumstances, to transcend various states of consciousness.

The first significant such meditation appears in a short passage from Robert Kroetsch's *The Studhorse Man* (1969). According to John Clement Ball, one of the major assumptions of Kroetsch's writing at that time was that "writing springs from a sense of place: the writing that comes *from* a place (such as the prairies) will be the writing *of* that place" (21). In *Alberta*, a book-length sketch of the province published in 1968, Kroetsch had described passage by train over the High Level Bridge approvingly: "It grows on you; the heavy old bridge where trains flash across, coming north from Calgary, the valley deep and green below, the river running free" (qtd. in

Beran, 190). In this distinct, under-represented space, John Thieme suggests, for Kroetsch "The conventions of classic realism begin to seem at best an inadequate vehicle for attempting to render the Prairie experience in fiction and at worst a totally irrelevant set of artificial rules" (91). The novelist, Thieme argues, wanted to find "a new syntax" (95) for describing peoples' interrelationships on the prairies, one which was at heart open-ended, instead of being "based on discourses of enclosure and regulation originally generated by European social situations" (91).[52]

At one point in *The Studhorse Man*, Hazard Lepage, who has holed up in the Provincial Legislature the previous evening, is now escaping to the south side and out of town. His quest is to breed his stallion, Poseidon, to as many mares as possible in order to continue the horse's bloodline. He sets out across the High Level, "a black iron tunnel in which patterns of parallel lines and acute angles are repeated and repeated until they knock at the senses like a film run too slowly; each picture is both separate from and yet like all the others." Passage over the bridge thus reinterprets the surrounding landscape as fractured and needing to be reassembled. While this re-narration of place is somewhat disconcerting, "Hazard survived this bludgeoning; then, on the far side of the bridge, at the southern exit where they must angle left and upward and climb a low rise, Poseidon was frightened by a CPR freight train passing overhead on the tracks above the roadway" (42). As Poseidon is frightened at the south approach and bolts across traffic, (fictional) history is made as Hazard has a run-in with a truck driver whose path he has inadvertently blocked. By means of insulting one another, the two exchange a long stream of slang terms for the penis, scandalizing a number of female pedestrians. "Because of this exchange and the consequent delay it occasioned," relates the narrator, "trucks were forever banned from using the High Level Bridge" (43). Mythically, then, Kroetsch's bridge accretes an history as it facilitates passage—this history is the only thing born of a language of crossing which is otherwise quite literally impotent. Significantly, Hazard's crossing can only be performed once, after which the language of crossing itself is forever changed. He has added a mythological facet to its passage which will remain, permitting users to voice previously prohibited thoughts while crossing, while precluding ways of making the passage which had previously been permitted.

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[52] For further discussion of these particular matters in *The Studhorse Man*, see Roderick W. Harvey, "The Limitations of Media" (1978); Brian L. Ross, "The Naked Narrator: 'The Studhorse Man' & the Structuralist Imagination" (1985); and Sylvia Söderlund, "Canadian Cryptic: The Sacred, the Profane, and the Translatable" (1991).

Another major, albeit somewhat oblique, mention of the bridge occurs in Margaret Atwood's short story "Polarities" from her collection *Dancing Girls* (1977). The story contrasts the experiences of Morrison, a university professor from the United States, and Louise, a graduate student and instructor, both of whom are living through winter in a Western Canadian city which is obviously Edmonton, although never named as such. (If there were any real doubt that the city in question is indeed Edmonton, the houses are "stuccoed with a greyish gravel Morrison found spiritually depleting," and, "Here they did not take the snow away; they spread sand on it, layer by layer as it fell, confident there would be no thaw.") In any event, as Gregory Houghton puts it, the story "operates outside conventional geographical space. We are given the barest clues as to where these various worlds may be situated" (88). The story's concern is again to meditate on the nature of a Canadian geography for which satisfying techniques of literary representation do not yet exist. In the prairie city Atwood describes, Morrison arrives by car at what he thinks are the outskirts, but later realizes "that this was in fact the city." On a trip out of the city limits, Morrison overwhelmingly feels that "the land was keeping itself apart from him, not letting him in" (42). By what language might it be grasped?

Louise, for her part, has divined an "all-inclusive" system for this purpose, which can be fully realized only when she is able to "complete the circle." She elaborates,

> Don't you know? The city is polarized north and south; the river splits it in two; the poles are the gas plant and the power plant. Haven't you ever noticed the bridge joins them together? That's how the current gets across. We have to keep the poles in our brains lined up with the poles of the city. (52)

The bridge, for Louise, is not only a physical connection between two physical riverbanks, but a conduit of unseen forces whose consequences are significant. To the other characters, her theory proves simply that she is crazy, and indeed Louise is in time taken to a mental institution. Morrison, however, is slower to accede to thinking of her as irrational than others; he reflects, "the only difference is that she's taken as real what the rest of us pretend is only metaphorical" (58). In practice, her thoughts lead him to reconsider what he must do to inhabit this foreign geographical area. Atwood suggests here that what is currently defined as mental illness is not a failure to make rational connections, but a tendency not to see the separations between phenomena which others must, in order to inhabit the forbidding, frozen space of the prairie in winter. At the end, Morrison realizes that all of the inhabitants of the city are in their own ways constructing physical and psychic barriers as defences against the terrifying emptiness of the terrain. While realizing this, he has a harrowing yet clarifying vision of the prairie landscape stretching endlessly north, across mountains, frozen rivers, tundra, and eventually, to the "frozen sea." As John N. McDowell puts it, this is "a fitting and an appropriate image as one can find for stasis, for an individual going nowhere" (260). No bridge exists for Morrison in this locale to define the landscape, so he is overwhelmed. The High Level Bridge, it follows, is not a solid achievement representing the triumph of civilization in steel, but only a tenuous imaginative link between small communities living on the remote edge of nowhere, poised always at the brink of nothingness.

The most ambitious literary engagement with the High Level Bridge of this era—perhaps ever—is that of Wade Bell's *The North Saskatchewan River Book* (1976), a short volume of prose, poetry, and fragments of newspaper reports and voices from the city's history. In the three decades since this book's publication, it has regrettably received virtually no critical attention; perhaps its title, along with a cover design based on an old photograph of a train crossing the High Level Bridge, stamp it as excessively regional. However, while it is perhaps excessively romantic in its tragic vision, being rooted in the liberation-era political and environmental discussions of the 1970s, it engages the bridge in a challenging, original, and insightful manner.

Given the relative dearth of writing about Edmonton to this point, Bell, much like Kroetsch and Atwood, sets out to write a book which will be "a muse for a city without song" (7). He insists on geographical specificity as a cornerstone for his meditations, to the point where at times he pounds home short, declarative sentences drawn from the historical record: "The first train to cross the newly opened High Level Bridge was CPR No. 33. It had first and second class cars. The bridge that supported this fine train cost a dollar a rivet to build. That was in 1913" (48). This is Fact, not fancy, and it is devastating in its blunt materiality. Bell inaugurates his exploration early in the book with an outline of a history of violence entitled "History of the Canadian West." This section spans a panorama of woe, from early fur-trade massacres to modern-day barfights, from workers falling from the High Level bridge to distraught individuals committing suicide by jumping. These tragedies compose the tragic tissue of the city as Bell knows it (8-12).

In the midst of all this belligerence, the High Level Bridge itself is a begetter of violence and dislocation which acts as a man-made termination point stanching the flow of nature. By cutting off the river's natural current, it destroys history itself. Near the outset, we find the fictional narrator living in a room in 1912 with "what many rich men's houses do not have, and that is a view that other men think desirable":

> It is a view of the bridge, of the skeleton bridge thrust from the riverbank, partly made, already immense and to my mind ugly, already looking cold and ancient as if the winds of the North Saskatchewan had layered it with a century's grime and the northern clouds bathed it in sour rain. It is easy to imagine the bridge abandoned rather than new. (13-4)

This voice belongs to a man who has been working on the bridge, yet who that very morning has witnessed a companion accidentally fall to his death off the structure. Now, the cozy domestic space he shares with his female companion has been invaded and perverted by the tragedy, and "I am afraid. It is time for me to leave" (16). Yet this tragedy is not only his own, but that of the North Saskatchewan River itself: "Probably if it had a choice it would detour around this city. For Edmonton is the City of Progress and progress is unkind to rivers" (19).

The Bridge is almost redeemed when, at one point, it does briefly house a mystical spiritual presence: "Straddling the CPR tracks at the north end of the High Level bridge is the Metropolitan Church of Christ the Magician," which in 1942 "was opened and mystically blessed by the founder from an empty theatre in Paris" (37). This church can only be seen by certain people under certain circumstances. One night, the narrator, here a young man contemporary in age to the author, is stumbling home drunk, about to cross over the top deck. He sees the church and is allowed to enter, but begins to vomit during the service, and it is forever lost to him.

In the final reckoning, the only successful transformations the bridge offers are those which enslave the landscape and erase its First Peoples. Tellingly, the very next section reinstates the bridge as solid, prosaic fact:

> The bridge was there. The railroad had made its penetration. The past died. Only the future existed then. The past had been a struggle for existence. Now you did not need to look back. Now there was only the future. . . . The bridge was there and what horse would challenge a train on its own tracks on its own bridge when what waited for the loser was the river below. (40)

In this passage, the structure is specifically gendered as male, and maleness is portrayed in this book as rationality, as "those cold claws of right and wrong" (80), is inherently destructive. Near the end, Bell optimistically hopes for the bridge's fall, for these "Beams of empire spanning a river," it so happens, "are not so deeply rooted in earth, or in the mind. And when they fall the people of the bridge are upside down in the air" (86).

Hence, Kroetsch, Atwood, and Bell all find different mystical transformations in the physical passage of the High Level Bridge, each of which dramatically reverses the sense of optimism about progress of the 1950s and 1960s. Progress, these authors all suggest, will not be the physical renovation of the bridge, but its potential to be transformed by the spiritual and moral lives of humans while maintaining its current physical form. Kroetsch has the bridge dramatically altering perception, yet in the end being altered irrevocably by his mythical (anti)hero. Atwood finds the bridge serving only the most tenuous connections between sides—connections which, once perceived, brand the subject as insane. Bell finds the bridge destroying the past; it holds out epiphany to its users only to withdraw it forever.

Yet the last transformation of the bridge along such philosophical, aesthetic, and ethical lines of the 1970s was the work not of a writer of fiction, but a composer of built space itself. Edmonton sculptor and land artist Peter Wilson had first proposed to transform the High Level Bridge into a giant waterfall with an assembly of water pipes in time for the Commonwealth Games in 1978. In a newspaper report that year, he famously proposed to "make a spectacular out of it."[53] Lewis himself, a quiet but intense Welsh-Canadian character who wore long hair, a heavy beard, and loud, colourful suits, had studied in Europe with Salvador Dail; he signed all of his correspondence "Automatic-Output." So dedicated was Lewis to realizing his unique creative vision that he would, at the risk of being tossed out on the street, infiltrate corporate board meetings in office towers at opportune moments, in order to secure financial donations for his projects.[54] Although plans for his waterfall initially fell through for a number of reasons in 1978, he was able to secure funding for the project once more in time to celebrate the province of Alberta's 75th anniversary in 1980. The project, now named the "Great Divide Waterfall," was not without considerable controversy. In debate at city hall, an alderman suggested that the same effect could be achieved by "1,000 people standing on the bridge after drinking a lot of beer." For a time, the debate over whether or not to proceed with the waterfall almost threatened to create a lasting social schism between the city's pragmatic rationalists and open-minded creatives. In a May 1980 editorial *Journal* columnist Olive Elliott criticized those (many) people against the waterfall because it was so "meaningless."[55] Others confidently predicted that the proposed rate of flow would only result in a thin mist, barely visible to the naked eye. Finally, on August 28, just as the falls were about to be turned on for the public for the first time, the *Journal* reported the discovery of dish soap bottles and fabric softeners stuffed into the new pipes, in an attempt at a prank, or perhaps at sabotaging the new waterfall.[56]

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[53] "Hornby's hurrah," editorial, *Edmonton Journal* 15 Apr. 1978: A4. As the title indicates, this particular report also contains the somewhat bizarre revelation that the bridge was at the time "affectionately known among Edmonton's underground as 'Hornby.'" To this author's knowledge, the nickname has not survived to the present.

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[54] Lois Hammond, "Let There Be Falls!" *Edmonton Journal Today Magazine* 30 Aug. 1980: 5-7.

[55] Olive Elliott, "It's all water under the bridge," *Edmonton Journal* 15 Jul. 1980.

And yet when it was turned on for the first time at the end of August, 1980, the effect was, for once in the history of this stolid, responsible prairie city, to overwhelm any grumbling in a joyous tidal wave of wonder and awe. The valves were opened, and the mist spouting from the pipes built into a white, hissing torrent, obscuring several of the bridge girders and supports for the structure's entire height. A huge crowd gathered in the river valley fell silent at the moment. Soon, according to record, gasps of wonder could be heard, giving way to spontaneous choruses of "Happy Birthday" and, indeed, to tears being shed at the sheer beauty and magnificence of its wholesale transformation of the High Level Bridge and the surrounding valley. As columnist William Thorsell wrote, "We were not prepared for the marriage of grandeur and delicacy as the water plunged to the river below." Why was it so moving to see the waterfall in action the first time? Thorsell first thought that it symbolized that "Man has triumphed over man in the name of nature," but then, given how convoluted this logic was, thought better, and, hitting the nail on the head, paraphrased Lewis Mumford in suggesting that "Edmonton is truly becoming city as theatre."[57] The city was no longer an entity shaped by the forces of commerce, that is, but a performance.

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[56] Janet Vlieg and Martin Cohn, "Saboteurs seek soft, soapy falls," *Edmonton Journal* 28 Aug. 1980: B1.

This fascination with the transfiguration of the bridge, moreover, belies the profound yet ambiguous place it (and structures of its type and age everywhere in North America) inhabited in the consciousness of the city's inhabitants, especially at this historical juncture when people were becoming interested in the mythical forces and the barely glimpsed traces of lost histories contained and conducted by such built works. To *know* the bridge, still standing decades after the people who planned, built, and used it have departed from the stage, is to experience an impossible sense of yearning. Like Barthes' Eiffel Tower, while it appears to be a fairly solid object from a distance, when approached the High Level Bridge turns out to be a mere skeleton containing only air. The span, built for and open to the general public yet by design experienced by people moving along one at a time in single file, seems infused with this promise: one day, it will give up its secrets, we will gather around it, and in using it, we will somehow be transformed ourselves. In the meantime, the bridge, like all bridges, is no gathering place, no destination at all, but only a place of transition. To be stopped in the middle of the bridge is most likely to be caught in a traffic obstruction, or to be contemplating jumping off the walkway. The Great

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[57] William Thorsell, "Happy Birthday Magic," *Edmonton Journal* 3 Sep. 1980.

Divide waterfall transforms the bridge into something inhabitable by making it a site of gathering, contemplation, and awe. With it, the bridge is no longer defined by its transportation function but by its sheer presence.

Unfortunately, the magic of the waterfall's first use has been more or less lost. It still runs every summer for a few hours on holidays (in operation, it uses 11,000 gallons of water per minute of treated city water [Rooke 19], rendering it too expensive to use more often), but is now mainly known as a "cheesy tourist attraction," rather than the astonishing artistic achievement it was thought to be in the late 1970s and early 1980s.[58] Perhaps installing interpretive placards from prominent vantage points could partially rectify this state of affairs, but that is somehow doubtful. The art of the waterfall, when first installed, was to transform the central area of Edmonton from a prosaic, functional built landscape into an exhibition of civic joy, a transformation which, no matter how far-reaching or permanent its effects, can only occur to quite the same extent one time.

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[58] The language most commonly attached to the Great Divide Waterfall now is the boosterish (and inaccurate) point that it is twenty-four feet higher than Niagara Falls, terms more appropriate to a clever promotional gimmick than to a serious work of legitimate aesthetic merit. A sense of anarchic crackpot glee, of course, pervades this installation, as it does other Land Art works of the 1970s, one which for this author makes the work all the much more enticing. Still, such language does not so much capitalize on that glee for the sake of challenging perception as ultimately to limit the range of public appreciation of the work. Polemically, I agitate for the use of the word "attraction" to be banned from descriptions of this work, in favour of "installation."

Plate 5 The Great Divide Waterfall, as photographed by Don Pirot. (Copyright 2003; reprinted by permission)

Mid 1980s to the present: "We want to preserve something of our past"[59]

The cumulative effects of these artistic explorations and experiments of the 1970s were to add entirely new categories of appreciation to the High Level Bridge. I again stress, though, that these categories only represent new ways of engaging the potentials for transformative signification already inherent to the structure as practised space. As I have said, such new categories of appreciation, combined with the inexorable passage of time and its destruction of the first-hand memories of the building of the bridge, brought to the surface whole new realms of epistemological lack. As local historian Alex Mair regretfully wrote in the *Real Estate Weekly* in 1989, although "we know a great deal about the High Level Bridge, . . . the story of the men who built the bridge gets lost somewhere in the sands of time."[60] This latest loss calls into being a different reflective process in search of another new language of passage. As mythological forces and histories came to be seen as permeating the bridge, the overall approach to this fantastic time-space became preservationist, and the bridge, somewhere in the midst of being interpreted for new generations of users, became a museum—a spatial narrative in which users are dynamically conveyed into the departed past.

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[59] Frank Dolphin, "What should be done to keep the past alive?" editorial, *Real Estate Weekly* 30 Nov.-6 Dec. 1989: 2.

[60] Alex Mair, "They did it the hard way," *Real Estate Weekly* 6-12 Apr. 1989: 4.

In this era, more interpretive signage went up on and around the structure. In April of 1987, The Canadian Society for Civil Engineering, then observing its 100th anniversary as an organized profession in Canada, mounted its own plaque on a cairn immediately northeast of the bridge, recognizing the structure as "as one of Alberta's major engineering achievements of the past century."[61] Another plaque at the northwest approach, installed at the request of the Edmonton Historical Board in 1992, also relates basic facts of the bridge's size and construction history to pedestrians. The bridge has more recently seen the erection of a sign at the south approach to mark the site of a lethal bicycle crash, and, in 2002, notices at the ends of both walkways to notify people in distress of The Support Network, which offers crisis counselling to those contemplating suicide.[62]

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[61] "High Level Bridge selected," *Edmonton Journal* 10 Apr. 1987: B3.

[62] According to a report in the *Examiner*, in 2001 alone the police were called thirty-five times to the bridge regarding suspected jumpers. According to Constable Kurt Martin, "There were days when we would go three or four times a day." On October 8, 1996, the *Journal* published a story by reporter Conal Mullen and dramatic photos of police preventing a young man from jumping off the bridge (A1); no earlier examples of such reporting exist in the archives, aside from the aforementioned coverage of children playing on the structure for fun. After long being considered impolite even to discuss, such

Although I contend that the need to preserve the bridge's appearance as it was in the past grew out of the intellectual climate of the 1960s and 1970s, on the surface structural decay was the main factor in bringing the matter of preserving the bridge to the fore. By the early 1980s, newspaper reports suggested that the new Light Rail Transit system, a short portion of which had been completed in time for the Commonwealth Games in 1978, would eventually pass to the city's south side by means of the streetcar right-of-ways on the High Level bridge's top deck. It was becoming apparent, however, that the bridge, originally built to handle such vast loads, might simply no longer be able to take the stress. In a 1909 operating agreement, the CPR had been charged with most of the maintenance on the structure, but in May of 1983, city hall accused CP Rail of "a poor maintenance record." As Mayor Purves put it, "the CPR hasn't been maintaining the bridge to the standards that we think they should have."[63] With the top deck's poor

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matters have only recently entered the public discourse, and we are still finding a language to deal with them. Herzog and Lowe somewhat euphemistically, if not outright flippantly, write that over the years, the bridge "has been Edmonton's preferred 'Lovers' Leap,' (there's only been a few, thank goodness!)" (50-51).

For recent discussions of the matter of suicide concerning other bridges, see, for example, see Peter Hall's "Shouldn't death be a swan dive?" (Blakstad 140-42), and Tad Friend's "Jumpers" (*New Yorker* [13 October 2003]: 48-59), regarding recent trends in suicide prevention attempts at, respectively, the Brooklyn Bridge and the Golden Gate Bridge.

[63] Katherine Dedyna, "CP officials deny bad maintenance," *Edmonton Journal* 28 May 1983: B2.

condition, a decision was taken in the late 1980s to accommodate the LRT crossing with a brand-new low level bridge, just upstream of the High Level. The Dudley B. Menzies LRT bridge opened in 1991. In 1989, the last train crossed over the High Level; the length of modern trains had rendered obsolete the CPR's old downtown rail yards, and its freight handling was moved to larger facilities elsewhere in the city.[64]

The CPR now sought to turn the partially abandoned bridge over to the city, and it soon became apparent how dilapidated it really was. In October of 1990, the *Journal* suggested that the bridge's days might have been numbered if it had started to cost too much to maintain.[65] Two months later, the same paper reported that the bridge would cost the staggering figure of $31M to be kept operating for fifty more years: "Corrosion has eaten away as much as 35 percent of some parts of the bridge's steel girders, and it needs major repairs although there is no immediate danger of failure."[66] It was clear that the bridge would either have to be extensively restored, or torn down and replaced. In April 1993, the city took control of bridge from the C&ER and CPR, and negotiations commenced to get these railways to kick in funds for a restoration of the structure.[67] By September, 1994, the province and the federal government had agreed to contribute to this project, contingent on the city's committing to keep the bridge in good enough shape to carry trains as part of a long-projected Edmonton-Calgary high-speed rail link.[68]

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[64] With the top deck now more empty than ever before, and no practical full-scale use for it on the horizon, the decades-old question of what to do with the space remains open to the imagination of Edmontonians. As recently as 1999, the *Journal* reported on the latest concept for the top of the bridge: a multi-use pedestrian corridor, as a link in the "Ribbon of Steel" conversion of the old rail right-of-way to a streetcar line and paved paths for walking and bicycling (Dennis Hryciuk, "Taking the High Road on Urban Sprawl," *Edmonton Journal* 27 May 1999: B3). As pedestrian walks of course already exist on each side of the traffic deck, this idea did not move forward. Time for a theme restaurant and gift shop, perhaps?

[65] David Howell, "High Level's days may be numbered; Has old age finally caught up with city's most enduring landmark?" *Edmonton Journal* 8 Oct. 1990: B1.

Once more, it is possible to argue that the decision to restore the High Level instead of tearing it down and replacing it with a modern structure was simply a matter of financial expediency: a new structure would have cost several times as much. Still, the cultural climate surrounding the bridge, born in part of the new categories of historical appreciation opened up in the 1970s, certainly played a part in making the matter of keeping the old bridge—and restoring it to an earlier incarnation—look like the most viable, rational option. The planned restoration, the city's public works department announced, would ensure that the appearance of the bridge stayed "as close to the original as possible, while making the necessary engineering improvements."[69] No alterations to the basic configuration of the structure would be made, and, although the west-side walkway would be widened, the orange hand railings were once again to be painted black. Just as the repairs got underway in May, 1995, City Council voted to begin the process of designating the bridge as an historical resource. In debate at City Hall, Councillor Michael Phair "said it is appropriate that council begin with the High Level Bridge because it is the second most recognized structure in the city, after the Legislative Building." The idea was that the city would "lead by example" in restoring historical resources, so that the private sector would follow with other projects.[70]

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[66] Mike Sadava, "High Level Repair Pegged at $31M Over 50-Year Span," *Edmonton Journal* 22 Dec. 1990: C1. See also editorial by John Geiger entitled "The High Level: Headed for Scrap" (C1) in the same number.

[67] Marta Gold, "Trolley Plan Back on Track," *Edmonton Journal* 17 Apr. 1993: C1.

[68] Don Thomas, "High Level Headaches For Commuters," *Edmonton Journal* 15 Sep. 1994: A1.

The reconstruction closed the bridge down completely for six months. In mid-April of 1995, the *Journal* reported Mayor Jan Reimer's advice to motorists slowed in traffic: "Check out a little light reading, like *War and Peace*."[71] However, a series of articles in the same newspaper in late April ended up reporting that the traffic problems were not really that bad, especially considering the epic snarls which had been anticipated. In a way, the city collectively discovered how relatively little utility the bridge now had to the functioning of its contemporary traffic systems. The bridge's usefulness to the city, people now saw, was more symbolic than practical: it was a location where history could be preserved and in fact accessed by users.

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[69] Mike Sadava, "Putting a New Face on an Old Bridge Takes Lots of Paint," *Edmonton Journal* 26 Sep. 1994, B1.

[70] Kathy Kohut, "High Level wins historical approval," *Edmonton Examiner* 12 May 1995.

[71] Florence Loyie, "Now For a Chorus of Bridge Blues," *Edmonton Journal*, 11 Apr. 1995: A1.

Construction continued throughout the summer, and, as the bridge re-opened on 12 November, perhaps the most significant official civic ceremonies ever to commemorate the achievement of the bridge took place, all steeped in a slightly incongruous mixture of nostalgia and 1990s ecological awareness. A city bus, painted up like an old trolley car, took brand-new Mayor Bill Smith, MP Anne McLellan, and Stony Plain MLA Stan Woloshyn to the middle of the bottom deck for a Sunday-morning commemoration.[72] Smith had played with the Edmonton Eskimos football team earlier in his career, so to mark the occasion the dignitaries posed for a photo opportunity in which McLellan held a football and Smith kicked it down the traffic passage. Unfortunately, as the *Journal* pointed out, "The ball bounced off a bridge girder and fell into the river valley, much like the Eskimos' fortunes in Calgary." Smith then drove the first car across the newly-renovated structure, an "award-winning gas and electric model designed at the University of Alberta which beat out designs by 42 other universities."[73] That afternoon, the newly restored flow of traffic was again temporarily brought to a halt as a group called "Balanced Action for a Sustainable Edmonton" paraded across the bridge. As the *Journal* reported, "The green bridge group first made its presence known this summer when it hung a 10-metre-long banner on the bridge July 2 proclaiming the High Level a green bridge"[74] (what was uniquely "green" about this particular bridge remained unclear).

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[72] Rene Mauthe, "Renovated High Level Bridge reopens Sunday," *Edmonton Examiner* 10 Nov. 1995.

Another major—and even more nostalgic—development for the functioning of the bridge in this era was the return of summertime trolley car service to the top deck. In November of 1989 the city approved funding for a High Level streetcar. In a column in the *Real Estate Weekly*, Frank Dolphin approved of the plan, for it showed that "we've reached a stage in our maturity as Edmontonians that we want to preserve something of our past."[75] It took time for the service to come to fruition, but in 1997, the Edmonton Radial Railway Society, a volunteer organization, finally began summer service along the top deck of the bridge on the old centre rails left behind by the CPR in 1989.

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[73] Bob Gilmour, "High Level Reopening Marked by Mayor's Fancy Footwork," *Edmonton Journal* 13 Nov. 1995: B1.

[74] Andy Ogle, "Cars barred from bridge party," *Edmonton Journal* 9 Nov. 1995.

[75] Frank Dolphin, "What should be done to keep the past alive?" editorial, *Real Estate Weekly* 30 Nov.-6 Dec. 1989: 2.

Along with the city administrators' enthusiasm for preserving the bridge as a link to times past, writing about Edmonton, from a non-fictional, historical perspective, has in this period been at an all-time high. To date, the most significant survey history of the city is still J.G. MacGregor's venerable *Edmonton: A History*, released by legendary local firm Hurtig publishers in 1967 (and followed by a second edition in 1975), but a wealth of photography-based coffee table volumes, as well as many works of non-fiction devoted to more specific topics regarding Edmonton's history, have been recently released.[76] Still, the histories these works relate are lost, one realizes, in part because we ourselves rhetorically define them as such. While reading these books, Edmontonians learn to appreciate their city, but whereas this knowledge is therefore assumed, prior to its transmission, as something that can be learned in the first place, it inevitably becomes something distant from ourselves and our experience. History, in other words, is that from the past which we have lost, not that which we still remember.

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[76] The last five years alone have witnessed the publication of Alex Mair's *Gateway City* (2000), Kathryn Chase Merrett's *A History of the Edmonton City Market, 1900-2000* (2001), Charlene Rooke's *Edmonton: Secrets of the City* (2001), Lawrence Herzog and Shirley Lowe's *The Life of a Neighbourhood: A History of Edmonton's Oliver District, 1870-1950* (2002), Bill Sass and Marc Horton's *Voice of a City: The Edmonton Journal's First Century, 1903-2003* (2003), the City of Edmonton's *Naming Edmonton* (2004), and Linda Goyette and Carolina Jakeway Roemmich's *Edmonton in Our Own Words* (2004), among others.

Stephen Hanon's *Steel Ghost*, for example, a twenty-minute educational video about the construction of the High Level Bridge, came out in 1998. Although it sheds no particular new light on the bridge's construction for scholars, this well-researched and deftly-narrated montage of photographs and video footage of the bridge today speaks vividly of those lost histories which are now seen to permeate the span's girders and supports. *Steel Ghost* begins with an insert title screen of white letters against a black background, which reads

> It was built before the slaughter in the battlefields of two great wars, before Penicillin, or computers, or rockets, and before electrical appliances. It happened at the very dawn of the age of the automobile, just as the first rickety airplanes struggled into the sky. That's when they built the High Level Bridge . . .
> and it wasn't so long ago.

Rhetorically, these words locate the bridge as being essentially prior to the historical developments which make us what we now are. It is a product of a lost time, not of a point in a continual progression in which we participate in the present. Next follows some detailed shots of individual girders; as the camera plays over these structural members we hear a quiet, indistinct whispering. Semi-intelligible phrases begin to punctuate the sonic murk, and when we hear words like " . . . excavations caved in . . ." emerge, we come to understand that the girders are being imagined to whisper the distant, lost memories of the bridge's construction.

Next, Hanon presents a pantomime of actors in pioneer dress, making their way across the open prairie on a horse-drawn wagon, perhaps on their way to take up their homestead. They approach a river, stop, and dismount: the water is too deep and wide to ford easily. Father and son exchange in a significant look, and we can see the unspoken message in their eyes: *to build a great city here, we must bridge this waterway, and make smooth the path of civilization* (no First Nations people, of course, are on hand at the moment to provide advice or perhaps ask the family not to build without consulting them). As they walk from the wagon down to the river, the colour fades away and the scene becomes sepia-tinged black and white. Aesthetically, their action takes them out of the realm of a certain universal logical response to a challenge being presented and into the representational discourse of a particular—and foreign—historical moment. The son moodily picks up a stone and skips it across the river; its arc fades into an image of the completed bridge as it looks today. The actions of a child, it is implied, lay the path of the mighty structure; in its maturity, it withholds its intentions, yet in its youth such intentions were simple and easily grasped. Elsewhere in the video, an actor, whilst jogging along a path that leads under the bridge in the present, stops for a moment to contemplate the majesty of the giant bridge in wonder.

In this way, as contemporary writers and readers embark on retrieving the irretrievable histories accreted to the bridge, they create new myths for making the space legible and inhabitable. The most absurd—and tantalizing—permutation of this recent discourse is the recurrent myth that a man's body lies in one of the bridge's piers. While the story is apparently of long standing in the city, it has only recently begun to make its way into print. In 2001, Charlene Rooke reservedly writes of "the persistently but unprovable local rumour that one body lies encased" (53), while a year later Herzog and Lowe relate the story as established fact: "One worker fell to his death and was entombed in the north concrete pier" (49). "Unprovable" is probably the best word to use here, but, as current City of Edmonton bridge engineer Shiraz Kanji pointed out to this author in a 2003 interview, the construction methods of 1910 were much slower and more labourious than those of today and there would have been plenty of time to pull out a fallen worker without significantly holding up construction (moreover, one adds, were the construction superintendents of the day indeed so single-mindedly and ruthlessly concerned about structural integrity, as the myth implies, would they not in fact make every effort to pull out a body, in order to eliminate an obvious source of weakness in the concrete?). The myth, however, locates the High Level within an old bridgebuilding tradition discussed earlier in this dissertation: a bridge takes a life to keep standing, so if necessary, a human sacrifice must be made to protect the structure. As we have seen throughout this history, the bridge has always—though not in the same way—been seen as exceeding the scale of human beings, and this myth has the effect of reasserting the role of the human body in the structure. In what we cannot ever know, we have found a way to insert ourselves.

And yet I ask whether it is at all possible to articulate any meaningful collective transformation in the space of the contemporary living museum. If in walking the bridge we are conveyed backwards in time, can we become any more closely connected to each other in the present—that is, does the museum, in locating us explicitly in a history which is entirely behind us and not continuing to unfold, subtly reify the political and cultural state of things as they are? In many cases, these seem to be the exact questions with which recent writers of fiction engaging the bridge have been concerned, and some have perhaps articulated more coherent critical strategies for engaging passage across the span to the past than others.

Appearances of the bridge in fictional writing, not common in the 1980s, have lately returned. The search for knowledge of the bridge prompted by its passage through space continues, but the discoveries being made in the midst of this search have taken on a decidedly less mythical and more personal nature. John Lent's "As Far as He Could See," a short story published in 1996, describes the bridge as it was in 1960. The story is about the qualities of vision in spatial practice in the midst of the main character's developing relationship with his weak father. Young Rick makes three significant passages through Edmonton spaces in the story, each both less familiar yet more compelling to him than the last. Firstly, near the outset, he walks ecstatically through the south-side church where he is an eager altar boy, touching the pews "as they fell forward like a soft shuffle of yellow cards tumbling on the sides of things" (10). Outside, he knows his own neighbourhood so well that he feels "he could see the asphalt roofs from a height" (13). All in this space's layout is fully known to him, and he needs no guidance from his father to move through it. Secondly, though, is an unexpected trip north across the river with his father. The 109th street streetscape is narrated in detail, including authentic descriptions such as "They moved north again. Past Tipton Park where Rick played hockey in the winter. *The Nutty Professor* was still playing at the Varscona Theatre" (18).

When they cross the High Level Bridge, Rick is taken right out of the present time and of his own body and into an expanded present:

> Suddenly, the 105th Street Bridge was a steel blue accordion stretched out across the river and if he ignored the flashing black ironwork of the High Level as it clattered by, he could see Renfrew Park lying squat on the north side of the river. . . . He imagined an older version of himself suddenly, watching him watch these things. (18-9)

By being so removed from the moment and propelled forward in time, Rick can come to some sort of understanding of his distant and awkward but well-meaning father. He wonders at this point what things will be like when he is his father's age. Thirdly, when they arrive at the high school where Rick's father teaches, the older man offers to show his son something in a darkened room. "Don't worry, son," Rick's father tells him, "Just see how far you can go. Go on" (24), and Rick begins tentatively walking and then, losing his fear and trusting his father, begins to run at full speed in the absolute darkness. His father turns on the lights, revealing that they are in a newly built gymnasium (24-25). The more oblique the parameters of built space, the more language must be developed in order to navigate it—and therein is the potential for cross-generational communication created. The High Level thus acts as an interim stage in Rick's development as a human being with a mature attitude toward spatial practice. Although it does not totally obscure its surroundings as does the darkness of the closed gymnasium, it veils them and makes them strange, in such a way as to prompt reflection on the passage of time. This reflection is in turn made more poignant in that it is set explicitly in the past: we see Rick imagining himself in the future from the standpoint of that precise future. The bridge, for Lent, is a machine for uniting past and present versions of ourselves.

When the High Level makes a brief but notable appearance in Darrin Hagen's *The Edmonton Queen: Not a Riverboat Story* (1997), the effect is also to describe the structure as saturated with personal history. The book is a memoir of Edmonton's vibrant cross-dressing culture in the city's homosexual community of the 1980s. Near the beginning, the author, growing up in the town of Rocky Mountain House to the west, stands on a bridge over the North Saskatchewan River, shredding a love letter from an "older man" which has caused him trouble within his family into a river which at that point is a "brilliant clear blue" (9). As he contemplates the scene, he wonders "how long it would take to float to Edmonton. If I had a boat." He could have journeyed to Calgary, he writes, but "the river runs north. And it's my river" (10). After taking the body of the book to describe the wild parties, gay bashings, and the era's highs and lows in general, near the end he again contemplates the river from above, this time in Edmonton. In a poignant scene, he stands on the High Level Bridge and scatters the ashes of a close friend who has died of AIDS into the water below. Reflecting, he writes, "The water was brown, not blue. It's the same river, but older. It carries more within itself" (149). Again, the bridge, in framing contrasting views of a changeable river, takes on meaning as the individual crosses it: moreover, to cross the High Level is to re-cross other, past bridges in a person's history.

Likewise, in "you will be in Edmonton in two weeks" (2001) by Jason Dewinetz, the poet is given a glimpse of his distant lover while walking out on the span, presaging her actual visit to come. The water below is as though "current took street light / and shattered it as though broken, / glinting like moonlight off ribbon." As the poet thinks this, another ribbon is granted to him: a woman appears on the balcony of a nearby apartment building, "come out for air, or to leave the structure of the room":

> pulling the light scarf from her neck,

> flinching as it's torn by wind from her fingers,
> thrown out into night,
> caught by city lights and a breeze,
> drifting, slowly, towards water.

Looking up, he feels "As though, for a few seconds, / you have torn through distance, somehow / and have spilled from desert to river valley, / glinting like light on water, / a white scarf held in the air." Again, the bridge is a connection between consciousnesses, not between commercial districts or geographical regions. Having known it would have this effect on him, Dewinetz realizes that he has "avoided the bridge until tonight, / not wanting to appear / too eager." The bridge is already *known* by those making their passage over it, albeit in completely idiosyncratic, personal ways. In the writing of Lent, Hagen, and Dewinetz, the bridge has, in the midst of moves to restore and preserve it to a long-lost standard, again attained some sense of the knowable and known, yet almost purely within the register of the individual.

Conclusion

What will come next for the High Level Bridge is difficult to predict: whether we will again lose and need to rehabilitate the language by which we inhabit it—and how—remains to be seen. Over only the last twenty years, the bridge's function in the workings of the space of the city of Edmonton has changed considerably. Like any museum piece, it belongs to us more than other objects (we are free to gaze on such items without feeling that we are trifling with the private property of others), yet only by virtue of our acknowledgement that, functionally, it belongs to an earlier era than our own. On January 1, 2000, the *Journal* marked the turn of the millennium with a digitally edited photograph on the front page of a special section, juxtaposing a locomotive crossing on top of the bridge with the LRT crossing the Dudley B. Menzies bridge immediately below. A introductory message on the page read, "Reliving the past is easily done in Edmonton. It's a new place. A place of living pioneers. Our roots are close to the surface. A perfect place to look back at the last 100 years of life on and off planet Earth" (I1). A much newer place, that is, than the very same infrastructure used to be considered half a century ago.

Such invented connection with the past is, as above, only the most recent of a number of ways in which passage over the High Level Bridge has been made readable over the past ninety years. This history of storytelling bears a definite but uneasy relationship to those proposed and worked through using different theoretical models. In *The Production of Space*, Henri Lefebvre argues that in Europe around 1910, the way in which social space was produced underwent not a complete changeover, but a modification. "Abstract space," a "Formal and quantitative" mode which "erases distinctions," and in which any "Differences, for their part, are forced into the symbolic forms of an art that is itself abstract" (49), evolved into a "contradictory space," in which "society in its entirety is reduced to an endless parade of systems and subsystems," all co-existing within the same Euclidian geometrical spaces. It was bad enough, Lefebvre implies, that for three centuries Europeans had lived in—and therefore helped to produce—a space which was understood only as a scientific absolute, structurally devoid of ideology or imagination; now, this space was carved up by a bureaucratic incarnation of the bourgeoisie, further obscuring the conditions of its own production and any mechanisms by which, with the proper tampering, it might be altered. The driver of an automobile, Lefebvre contends, is "concerned only with steering himself to his destination, and thus perceives only his route, which has been materialized, mechanized and technicized, and he sees it from one angle only—that of its functionality: speed, readability, facility" (313).

I agree with Lefebvre that a space which is, by definition, experienced dynamically proposes the question of its own readability as narrative (a reservation, of course, is that virtually *all* spaces are experienced in such a way—even a room meant only to be sat in represents a dialectic of enclosure which is practically engaged each time it is entered or exited). Moreover, in the history of the High Level Bridge we have indeed seen an increasingly fractured, idiosyncratic quality in the means by which it is inhabited. Yet clearly, the question of language, and its role in enabling the physical crossing of the bridge itself, has been far more foundational than a mere fictional gloss over an underlying social—or steel—truth to the structure. At our worst moments as bridge users, such abstractions and unresolvable contradictions have alienated us from one another's interests and worked to sustain a status quo which has been highly unjust. At our best, though, the bridge has stood not as a barrier to our imagining of a better world, but as the very catalyst in which that imagination, like the bridge's defined spatial passage itself, may be read. In crossing the bridge, the city has not merely passively absorbed codes freely available to all. Rather, it has been built and rebuilt according to codes which have been shared and lost with the passage of time.

Conclusion

This dissertation has argued that both fictional and non-fictional writing about bridges takes place at a three-way intersection of the following discourses: the dynamic pattern of impressions a bridge offers its users; the particular phase of a bridge's own history; and the concerns of the moment in wider intellectual and cultural discourses. Often, in fact, the impetus for such writing turns out to be a need to bring about new discourses to replace memories which have been lost: as the relentless passage of time gradually obscures a bridge's origins, new openings for fiction-making appear. As we have seen, virtually all such writing deals with how ephemeral one's association with a bridge truly is: for the most part one is in motion while crossing, and to have apprehended the entire shape of passage over a bridge as a coherent entity is to have already completed it and left it behind. Histories do accrete to such passage, but only to the extent that they are components of ever-changing community standards of spatial practice. Without an established hermeneutics, the stories bridges tell about space are difficult to discern, though always present.

According to Michel de Certeau's *The Practice of Everyday Life*, "In the technocratically constructed, written, and functionalized space" in which we live, our "trajectories form unforeseeable sentences, partly unreadable paths across a space" (xviii). Later in the same volume, de Certeau is quite specific about what he means by *trajectory*, by which he intends "to suggest a temporal movement through space, that is, the unity of a diachronic *succession* of points through which it passes, and not the *figure* that these points form on a space that is supposed to be synchronic or achronic" (35). This dissertation has found that bridges too are exactly such trajectories. However, it does not accord with de Certeau's contention that people intuitively choose to experience space this way as an oppositional tactic against the controlling strategies of constituted authority. Instead, it sees these patterns of experience and memory as inescapable states of perception. There is no bridge built not to function dynamically, and one can never see much of such a structure at once while actually using it. Nor is a bridge's essence wholly contained in this girder or that one: it is not a thing but a set process of receiving a number of impressions in an order. In other words, it is more congruent with Roland Barthes' description of the Eiffel Tower, which "is not a usual spectacle; [so that] to enter the Tower, to scale it, to run around its courses, is . . . to transform the touristic rite into an adventure of sight and of the intelligence" (8). Like the Tower that "offers for consumption a certain number of performances" (15), that is, a bridge is less a thing to be taken in than a dramatic operation—an *event*—to be enacted.

In the end, how does this type of exploration help theorize the agency and responsibility of users in space: how does it help elucidate the ways in which we interact with, take pleasure in, and resist built spaces? Throughout the preceding chapters, in seeking to understand how fictional writings not only describe but help substantively constitute physical bridges, I have repeatedly delineated histories which rely on an assumption of general spatial literacy. The problem, of course, is that while writers tend to read each other's work, most bridge users (not to mention structural engineers and writers of interpretive plaques) will not have read all or even any of the writings I have discussed. In a way, then, this dissertation's readings may be open to charges of elitism: they value most those understandings of space available to readers of canonical literary texts. What about the ways in which people who have never read these texts experience the spaces in question? For that matter, how can a written narrative, whose coherence relies on its having made artificial delimitations of beginning and ending, possibly correspond with a span whose use is iterative, and whose passageways are in many ways just integrated segments of a seamless network of sidewalks, roads, and streets? It may be the case, it becomes apparent, that narrative fiction about bridges only makes them readable by violently chopping them up—as we have seen, Hart Crane, after all, underwent a complex series of negotiations in *The Bridge* to avoid committing exactly such artificial acts of foreclosure while seeking a mythology appropriate to his time and place.

Yet to make such arguments is incorrectly to assume that there is no shared narrative practice among communities of bridge users prior to the moment a literary writer comes along and presumptuously confers a mythology upon the site. No such writer, however, was required to invent the legend that a man lies entombed in the High Level Bridge's north concrete pier, nor the idea that one could complete one's transformation from student to nurse by throwing one's stockings over the side of this span. These mythological functions, however, are not the only ones which have accreted over the years to the practice of the span. In fact, a far more subtle and insidious narrative framework underlies most of our bridge crossings: that of the homogeneous empty time described by Walter Benjamin.[1] As we have seen, American writers of the gear-and-girder era had an especially acute appreciation of the relative emptiness of progression through their era's built spaces. In both the pronouncements of the powerful and the popular imagination alike, machine technology was imagined not to produce new meaningful movements but to make movement itself effortless and therefore eminently forgettable. This persistent sense that one's individual passage through built space is essentially meaningless to others and to the space itself is no indication of an absence of ideology. Instead, it indicates the profound role of an ideology in which the construction of social meaning lies in the making of material products of commerce, not in the everyday imaginative lives of citizens. Because of precisely this state of affairs, as a discipline we need better to define and promote the concept of spatial literacy, a literacy which encompasses knowledge of all the multiple intersecting discourses mentioned at this conclusion's outset. The fictional texts studied in this dissertation differ greatly in their political, historical, and cultural locations, but each in its own way intervenes in this homogeneous empty time by suggesting that passage can become meaningful on a number of different intellectual, mythological, and spiritual registers.

By arbitrarily inventing beginnings and endings in order to find meaning, that is, writers of fiction present us with modes of understanding which, if integrated more widely into community standards of spatial practice, wrest control of space from the tyranny of the realm of abstract material objects and give it back to the active perceivers moving across the built world. These writers can help us understand that there is no meaningful knowledge of the constructed landscape outside of the particular temporal sequence of impressions by which it is revealed to us—and thus that there is no space not constantly requiring our ongoing consent (or submission) to become operationally meaningful. To the extent that we share these spaces with others, the work of reflecting on the meaning of this particular sequence can occasion some soul-searching ethical challenge regarding notions of belonging and exclusion and of personal agency within larger communities. When crossed with the benefit of Willa Cather's insights in *Alexander's Bridge* or Thornton Wilder's bridge in *The Bridge of San Luis Rey*, it becomes apparent that a bridge is a flawed machine for telling: the stories which we want most to hear are of those who have failed to cross due to catastrophic circumstance, yet those who have crossed successfully and those who could not are forever in two separate categories. The bridge can only cross between banks, but not between the living and the dead. While there are certainly political and ethical limits to this vision (not to mention aesthetic ones), it is in trying to make precisely such connections, I suggest, that we may productively cathect the forces which help form the shape of our belonging.

In this vein, I suggest that while the interpretive signage posted on and around Edmonton's High Level Bridge in the last twenty years makes an honest effort to provide pedestrians with an interpretive context to help make their experiences of the bridge meaningful, the information presented betrays a general sense of unease about the bridge's conceptual malleability in the public imagination. What people really need to know about the bridge, these signs imply, are century-old details about its initial construction now lost to contemporary cultural memory. It would be intriguing instead if someone were to pursue an interpretive project which would involve signage mounted at different points on the walkways relaying different moments in the history of the structure, quotations from the various literary and cultural sources discussed above regarding the bridge, and interesting details about the changing juxtapositions of natural and built features as they appear from particular viewpoints. Moreover, one wonders whether signage at each end could point to the various meanings people have previously found in the ensuing passage over the years, so that walkers would have interpretive questions in mind relative to which to frame their own reflections as they proceed. As it is, people already make such contributions unofficially. Lately, someone has been using a hand-made stencil and a can of spray paint to inscribe the image of a strained-looking face and the message "Eat more fibre" on the pavement of the west walkway. These particular statements, one suggests, address in yet another way the age-old question of what passage might mean for bridge pedestrians. In any event, if such graffiti artists are at all subversive, it is not because they either profane built spaces or claim them in the name of some supposedly ennobled alternative community, but because their actions harken so hopefully to a cultural practice of the built world in which it is possible to profane space in the first place.

These are therefore a couple of related directions in which this dissertation's exploration could be productively expanded. For one, a much more comprehensive study is required on the narrative implications of the patterns of impression offered by a range of gear-and-girder-age transportation technologies, including trains, streetcars, automobiles, ocean liners, elevators and escalators, early aircraft, and so on. Moreover, despite de Certeau's contention that "Every story is a travel story—a spatial practice" (115), it would be well worth looking more widely into the literary output of specific authors in the gear-and-girder era to see whether they arrive at different ethical, political, and emotional engagements while evoking different kinds of mechanical spaces in their various works. These efforts would further help to improve our knowledge of how, and to what ends, writers make readable the inchoate suggestions of meaningful speech which are so often whispered to us as we traverse our built landscape.

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